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ABSTRACT

This report presents the experiences and outcomes of accounting standards-setters who have, in many cases, been successful in establishing a national, uniform system of certification for public accountants. An executive summary appears first. The report begins with two sections that examine the evolution of accounting into a 20th-century profession. Two key aspects of accounting are highlighted: (1) the responsibilities intrinsic to the practice of accounting are ambiguous and require a unique combination of technical, academic, and employable skills that allow accountants to report facts objectively with a certain amount of subjective wisdom and guidance; and (2) the new responsibilities placed upon accountants due to changing technology and workplace dynamics have put pressure on the profession to specialize its services and create the accompanying education and certification. This preliminary discussion of accounting practice is followed by a more detailed investigation of accounting skill standards and how those standards are developed, taught, and assessed. The report presents accounting standards in terms of their technical, academic, and real-world characteristics. In its discussion of technical standards, the report focuses on the standards-setting process, the Certified Public Accountant exam, ethical standards, and continuing education. A discussion of academic and real-world skills highlights key issues surrounding accounting education and experience requirements. (Contains 85 references.) (YLB)

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National Center for Research in Vocational Education

University of California, Berkeley

THE STANDARDS-SETTING PROCESS IN ACCOUNTING: LESSONS FOR EDUCATION AND WORKPLACE REFORM

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THE STANDARDS-SETTING PROCESS IN ACCOUNTING: LESSONS FOR EDUCATION AND WORKPLACE REFORM

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EXECUTIVE SUMMARY

Perceptions about the changing nature of work and changing skill requirements have convinced many employers, educators, and policymakers that the United States needs a better system of education and workforce preparation. Many feel that standards can benefit such a system by improving the preparation of young people for work and life. The National Skill Standards Board (NSSB) is working to develop a national system of skill standards that will enhance workforce skills and increase national competitiveness, productivity, and economic growth. NSSB is committed to developing a more integrated system of education for students by linking various vocational and academic reform initiatives and establishing voluntary partnerships comprised of educators, employers, and representatives from labor unions and community-based organizations. These partnerships, coordinated by the NSSB, will form the governance structure under which skill standards will be developed, implemented, assessed, and updated.

The work of the NSSB, however, does not represent this nation's first efforts to develop national skill standards systems. Indeed, various industries, occupations, and professions in the U.S. have extensive experience with the development and implementation of skill standards. These experiences have important lessons for current standards-setting efforts.

Skill standards and certification have been at the core of professional development in the accounting industry for nearly 100 years. Accountants have vast experience in developing an industry-driven standards-setting system to guide professional behavior. The practice of accounting has faced many of the same economic and competitive pressures experienced by other professions and industries. Thus, the combination of long experience with similar external forces makes accounting a useful case study for other groups now developing their own standards.

Traditionally, standards for the accounting industry focused on the audit function, but this once-stable base is now shifting rapidly. Accountants are now operating in an environment that demands specialized services such as management advising, consulting, and personal financial planning. Economic conditions, technological changes, and more complex business environments have forced the accounting community to embrace this broader base of activities and drastically alter the waning auditing function. The industry has used skill standards, certification, and increased education requirements to overcome a

narrow conception of the accountant's role and manage its transition into specialized services and broader workplace activities. Initially hesitating to embrace the integration of specialized services, accounting standards-setters were eventually driven to broaden their view of accounting by competition from outside organizations, tangential industry groups, and other business interests that have been successful in establishing a presence in accounting-related services. Accounting standards-setters must re-establish a direction for accounting education and certification that encompasses the specialization of services.

The evolving nature of accounting services has changed the complexion of the technical and academic skills required of accountants. Like the employees in a majority of U.S. industries, as businesses become more complex and technology advances, accountants must continue to increase their technical knowledge. In addition, they must work more creatively; apply their technical knowledge to a broader set of abstract academic concepts; communicate effectively with a more diverse group of coworkers, supervisors, and customers; solve problems proactively and with limited supervision; and work in teams with peers and individuals with different skills and backgrounds.

Despite decades of experience that has defined accounting as a highly technical and precise profession, it is no longer sufficient to limit accountants to the performance of technical skills that are framed as narrowly defined tasks and routine methods/procedures. To be effective in the workplace and satisfy customer and organizational needs, accountants must be able to apply their technical skills to handle an increasingly diverse, non-routine set of situations and events. Accountants and employees in most high-performance, competitive work environments must commit themselves to continually learning and increasing their skills. They must become more concerned about general issues such as ethics, effective communication, and positive public relations that were once the responsibility of partners or supervisory-level employees.

Broadening technical skills poses great problems for those who develop assessment instruments for certification such as the Certified Public Accountant (CPA) exam. Years of acceptance in the accounting community and among the public have not sheltered the CPA exam from criticism. Indeed, as the workplace continues to stress more advisory-type activities that demand more and different types of skills, the exam is being considered less of a gauge of accounting competence. Although few in today's standards-setting movement will argue against the need for skills such as problem solving and communication, it has been difficult to develop assessments to measure their depth and breadth. Clearly,

additional time and thought needs to be devoted to the assessment process if the certification is to be valued by other practitioners and consumers. Although policymakers often present a stark distinction between standards-based and process-oriented ("seat time") regulation of educational practices, experience in accounting suggests that assessments must include both outcome measurements and regulation of the educational process. The rapidly changing nature of accounting skills makes it misleading to rely exclusively on an outcome assessment instrument to evaluate the education and substantive preparation of accountants. Accountants and educators need to work together to develop evolving and comprehensive approaches to assessment.

Academic accounting programs in colleges and universities have experienced difficulties keeping pace with the new demands for accounting services from the business community. For decades, various commissions funded by professional organizations and large accounting firms have concluded that accountants need more than technical training to fully utilize the vast amount of information they have available to them and advise clients. They must be able to gather and dissect information, apply general business concepts to specific data, communicate with a wide variety of individuals, and diagnose complex situations and offer solutions. These responsibilities require skills that span beyond the rote application of traditional methods and procedures. Unfortunately, educators in colleges and universities often lack the experience necessary to infuse classroom activities with contemporary marketplace applications. The gap between educator training and practitioner needs has widened to the point where accounting graduates feel unqualified, employers feel unsatisfied with their supply of recruits, and educators feel frustrated by conflicting demands on their time.

The accounting community initially attempted to narrow the gap between professional expectations and educational preparation by increasing the amount of schooling required for accountants. Merely increasing the number of hours in the classroom, however, will not offer the same caliber of training as that received by other professionals such as physicians and lawyers. Many accountants now believe that the educational experience of accountants must be linked to specified outcomes and must include a workplace component similar to residencies and clerkships in law and medicine.

Although the accounting profession has been successful in creating a widespread national system of skill standards and assessments, the community has not succeeded in developing an integrated educational system for which many education reformers are now

calling. Accounting's standards-setting experiences do, however, provide some valuable lessons for those groups that are now working toward education reform and a national system of industry-based skill standards.

1. **Skill standards developed for high-performance, professional workplaces have philosophical obstacles to overcome.**

   Efforts to broaden accounting skill standards and re-align educational requirements present philosophical obstacles for standards-setters that go beyond technical analyses of work tasks. Individuals and organizations must first rethink how they have come to define work and overcome the boundaries that traditional industrial categorizations have created. Furthermore, those involved with contemporary skill standards development must understand the cultural changes necessary to expand the often-limited roles held by individuals in traditional occupational hierarchies and promote the full development and maturity of high-performance workplaces.

2. **Standards setting must be an ongoing and constantly evolving process that emphasizes continual communication between stakeholder groups.**

   In rapidly changing industries, standards can actually become obsolete before they are published and well before educational programs can be adjusted to prepare students appropriately. Standards-setting efforts that dissolve after an initial set of standards has been produced have doomed those standards to imminent obsolescence. Even worse, groups that support such one-shot activities may eventually hold people to standards that fail to represent reality. Standards, assessment, and training tied to such a static certification process have little, if any, worth to practitioners, educators, employers, or the lay public. In the end, the most valuable contribution of the standards-setting process may simply be the continuing dialogue that is developed between practitioners, employers, customers, and educators. The most important characteristic of any standards-setting process is that it promotes, or indeed requires, constant updating and communicating.

3. **Professional workplace performance requires standards that offer conventions or conceptual guidelines rather than narrowly defined methods and procedures.**

As is now the case in many contemporary industries, accountants are required to perform an increasingly broader set of duties that offer less guidance and more ambiguity. Accounting jobs now require skills such as the ability to judge, problem solve, investigate, clarify, and communicate—what contemporary skill standards developers refer to as SCANS skills. The complexity and depth of these skills cannot be adequately represented by technical standards that merely list and measure the performance of isolated tasks and procedures. Instead, standards must offer guidance for the professional workforce and a conceptual basis for which to make nonroutine, intricate activities and decisions.

4. **A solid standards-setting system requires strong support from constituency groups and adequate time for planning, research, and experimentation.**

Skill standards do not function in a vacuum. They affect many individuals and organizations. The success and sustainability of standards systems demands adequate time for initial planning, research, and experimentation. Standards-setters need to understand and appreciate the sweeping effects of their efforts—the threats standards pose, the territories that will be infringed upon by standards, and the dynamics that surround the institutionalization of standards. Understanding such issues requires time and coherent direction. More importantly, understanding requires solid communication and support from all of those involved.

5. **Certification has potential positive and negative effects that must be balanced.**

The certification process in accounting has been subjected to increasing criticisms for not reflecting actual work experiences—a well-known controversy in all certification systems, especially those in which certain functions must be performed by certified practitioners. Narrowly defined assessments limit the information that consumers need to be able to make informed decisions and therefore fail to protect them by limiting their risks. Assessments limit consumer choice by decreasing the supply of practitioners and, thereby, increasing the prices that consumers must pay for services. Despite the potential disadvantages of certification, established

standards and assessments do facilitate employment mobility by providing uniform information about skills and abilities to prospective employers or clients. An established and consistent certification process can increase the public's trust in practitioners and help promote a sense of professionalism.

6. **Skill standards are most effective if they are industry-driven.**

Professional organizations, founded and comprised of practicing accountants, have directed the discussion about accounting skill standards and educational requirements since the profession was established in the late 19th century. Despite the fact that regulatory agencies have periodically threatened the private sector standards-setting infrastructure, the system has managed to maintain its distance from non-accountant business interests and governmental regulators who conspire to define accounting procedures and, therefore, accountant skills to meet their short-term needs. One important motivation for keeping standards setting in the private sector is the ability to control and upgrade the professional image of accountants through standards. Accountants have been particularly interested in trying to achieve the same status and prestige as professions such as medicine and law that direct their own standards and certification processes. Outsiders in the standards-setting process often limit the prestige and image of the profession.

7. **A seamless preparation system that offers academic and workforce training to meet the demands of a high-performance society must be comprised of education, hands-on experience, and examination requirements.**

No set of standards can specify all of the knowledge and skills necessary to perform in a complex workplace environment. Similarly, no singular set of experiences (classroom or workplace) can ensure the ability to apply the necessary skills, knowledge, and insights in the most efficient, effective manner. A broad-based certification that encourages the type of professional performance required in high-performance workplaces must, therefore, be comprised of three components—(1) education, (2) hands-on experience, and (3) an examination process to demonstrate the skills that educational and workplace experiences develop. All of these components must be improved if they are to work symbiotically and ensure that employees are capable of complex workplace roles and responsibilities.

INTRODUCTION

Perceptions about the changing nature of work and changing skill requirements have convinced many employers, educators, and policymakers that the United States needs a better system of education and workforce preparation. Many feel that a system of standards can play a central role in such a system. National standards can work in tandem with broader education reform initiatives to improve the preparation of young people for work and life. A national system of standards will emphasize educational outcomes rather than educational processes, provide students and educators with a better understanding of what youth need to know and be able to do to embark on a career, and provide employers with better information about the skills and qualifications of prospective workers (Bailey & Merritt, 1995).

The U.S. is now attempting to develop such a national skill standards system under the leadership of the National Skill Standards Board (NSSB). The purpose of the NSSB, established under Title V: The National Skill Standards Act of 1994 in the Educate America: Goals 2000 Act of 1994, is to "serve as a catalyst in stimulating the development and adoption of a voluntary national system of skill standards" (Section 502). NSSB was not created to set skill standards but rather to "establish guidelines used to endorse standards created by groups called 'voluntary partnerships'" that include employer, union, worker, community, and education and training representatives (NSSB, 1996). In addition, NSSB will have a role in the assessment and certification of skill standards.[1] The standards system that NSSB is working to develop will "serve as a cornerstone of the national strategy to enhance workforce skills that will result in increased productivity, economic growth, and American economic competitiveness" (Section 502, 1 and 2).

One unique aspect of the NSSB is their commitment to producing a more seamless system of preparation for students that connects workplace reform initiatives with reform efforts taking place in the education community. Lacking a formal educational counterpart,[2] NSSB is now working with the U.S. Department of Education's National School to Work

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[1] The standards endorsed by the NSSB cover entry-level through first line supervisory positions.

[2] Under the original Goals 2000: Educate America Act, the U.S. Department of Education was to establish a National Education Standards and Improvement Council to act in unison with the U.S. Department of Labor's National Skill Standards Board. This body, created to "certify and periodically review voluntary national content standards and voluntary national student performance standards that define what all students should know and be able to do" (Title II, Section B, Goals 2000: Educate America Act of 1994) was never formed.

Office and Office of Vocational and Adult Education to link state vocational and academic standards with industry standards. The three consortia of school-to-work implementation states that have been funded under this "Building Linkages" initiative (to be discussed in detail later in this report) will spend one year exploring effective models that incorporate academic and skill standards into school-to-work systems. In an attempt to promote the proliferation of high-performance workplaces, NSSB has developed a skill standards framework that requires workers to possess more than solid technical skills. In addition to occupational abilities, workers who obtain NSSB endorsed certification will need to demonstrate strong academic, basic, and crossfunctional (employability) skills (these will be discussed later in length).

Even though the NSSB is considered a pioneer in its attempt to establish a coordinated national (voluntary) system of industry skill standards, the U.S. has extensive experience with standard and certification systems. Indeed, examples of long-standing national systems (or guidelines) for training and certification can be found in a wide range of U.S. industries (see Wills 1993a, 1993b, 1993c for a detailed listing of standards and certification systems). Given this extensive experience with standards, it makes sense that those working under current initiatives should study past efforts and draw out lessons that will aid them in establishing a more coherent system.

This report is designed to be a source of such lessons by focusing on the system of skill standards developed for the accounting profession. The report will present the experiences and outcomes of accounting standards-setters who have, in many cases, been successful in establishing a national, uniform system of certification for public accountants.[3] Public accounting, as this report will discuss, has changed dramatically over the past century and provides excellent examples of the issues that arise when public and private sector organizations work together to regulate professional activities, protect public interests, and create a dynamic system of codified workplace responsibilities. By presenting accounting in this fashion, the report can be a learning tool for policymakers, educators, and industry representatives who are currently working to develop and firmly establish a system of standards.

A study of accounting is pertinent for several reasons. First, as we have argued elsewhere, changes in the nature of work have resulted in a "professionalization" of

[3] Although many areas of accounting practice have established certification systems, this report will focus on the skill standards and certification efforts that were initially directed towards public accountants—those that report on the financial positions of publicly held companies.

production workers (Bailey & Merritt, 1995, 1997). Jobs at many levels of the employment hierarchy are now assuming characteristics traditionally associated with professions such as medicine, law, accounting, or architecture. Workers in high-performance work organizations are being asked to function as more proactive workers who are capable of working both autonomously and cooperatively in teams. If the movement toward high-performance and professional workplaces is significant and sustainable[4], an investigation into how and why skill standards in a profession such as accounting were developed will provide important insights into the future of skill standards setting in a broad range of occupations.

Second, accounting has developed an extensive system of standards and, in the process, created a long and well-documented history. For decades, accounting standards have been discussed and scrutinized in public before state and national legislative bodies and in private among the various professional associations representing practitioners and educators. Efforts of organizations such as the American Institute of Certified Public Accountants (AICPA) to maintain industry control of standards and limit government intervention have many applications for trade associations and industry groups that are in the process of creating standards and accompanying certification systems. Studying the well-developed and often tumultuous relationships between accounting groups, business organizations, and government regulatory agencies offers many learning opportunities. This is especially pertinent given the leadership role that the NSSB, a quasi-governmental agency, will assume in endorsing standards and certification processes. Indeed, if the efforts of the NSSB are to be respected and sustained, it must become a coordinating body that assumes a certain amount of authority (albeit informal). It must direct the efforts of a wide variety of institutions and organizations, some with extensive success and experience in developing and implementing standards and certifying their employees. The future will surely present the NSSB with a variety of turf-battles, many of which the accounting standards-setting community has already dealt with and, in some cases, conquered.

Third, despite strong state control of accounting through its fifty-four State Boards of Accountancy, the profession has been successful in developing and implementing

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[4] Estimations on the number of American firms that employ high-performance strategies range from 5 to 30%. Although there is great hope for the potential of high-performance workplaces in transforming the American economy and the skills of the American workforce, data that pinpoints the extent of actual growth is inconclusive at this time.

national certification of technical standards through a uniform Certified Public Accountants examination (CPA exam) that is now being used in every state. In varying degrees, practitioners, employers, and educators at state and national levels have been involved with development and revisions of the examination since its inception over 100 years ago. Accounting organizations have also worked to revise the exam as the nature of the accounting profession and the activities of accounting have changed. Aspects of the development and implementation of the CPA exam have particular value for those who are now working to translate industry-based skill standards into assessment and certification tools.

Thus, accounting seems to have attained many characteristics of the standards systems that current reformers are trying to develop. At the same time, however, there have been and continue to be many problems and tensions in the operation and evolution of the education and certification system in accounting. The CPA exam has often been criticized for failing to represent the needs of employers. Accounting's educational system is considered by some to be too focused on narrow, methodical aspects of accounting which, in turn, discourages many potential students from majoring in accounting. Despite over twenty years of experience in developing skill standards in accounting, the Financial Accounting Standards Board is continually criticized for the processes they use, the issues they choose to address, and the outcomes of their efforts. Contemporary standards-setters can learn equally valuable information from many of the controversies that still plague the accounting standards-setting process. As this report will discuss, standards-setters in accounting are continuing to confront many of the issues that are now bedeviling the NSSB and the agencies and organizations that are working towards a broader system of skill standards and the integration of classroom and workplace learning activities.

Outline

In order to provide the reader with some background on an industry that has such an extensive history in the United States, this report will begin with two sections that examine the evolution of accounting into a 20th century profession. Two key aspects of accounting will be highlighted in these first two sections: (1) the responsibilities intrinsic to the practice of accounting are ambiguous; they require a unique combination of technical, academic, and employability that allows accountants to objectively report facts with a certain amount of subjective wisdom and guidance; and (2) the new responsibilities placed upon accountants due to changing technology and workplace dynamics have put pressure on the profession to specialize its services and create the accompanying education and certification.

This preliminary discussion of accounting practice will be followed by a more detailed investigation of accounting skill standards and how those standards are developed, taught, and assessed. The report presents accounting standards in terms of their technical, academic, and real-world characteristics. In its discussion of technical standards, the report will focus on the standards-setting process, the CPA exam, ethical standards, and continuing education. A discussion of academic and real-world skills will highlight key issues surrounding accounting education and experience requirements.

THE ACCOUNTING INDUSTRY: MOVING TOWARD HIGH PERFORMANCE

The Increasingly Complex Role of the Professional Accountant

For nearly 100 years accountants, educators, and government regulators have deliberated on the exact nature of the activities and responsibilities of accountants. Are accountants bookkeepers or consultants? Are their skills technical or judgmental? Are they engineers or artists? What is the extent of their liability in collecting and reporting financial information? Understanding the jobs of accountants is further complicated both by wildly differing public perceptions of their roles and by changing technologies and service markets that have had profound effects on what accountants are able to do and what is expected of them.

Role ambiguity is particularly true for auditors who perform the "best known function of the accountant"—the audit or the attest function (Porter & Burton, 1971, p. 4). Although auditors are contractually obligated to represent their "clients," they are legally obligated to objectively and independently apply a set of technical criteria and produce a report that reflects accurately the client's financial situation, even if that situation reflects poorly on them. Relying almost completely on the information provided by their clients, the auditor is not only responsible to the client for the document that they produce but to the public at large who uses the information presented in their documentation for a variety of investment decisions. Auditors must, therefore, be cognizant of the private, corporate interests of their clients while protecting the public's interests.

Given a "plethora of civil liability and criminal lawsuits against CPA firms" that emerged as a result of accountants' often conflicting roles, the accounting community has been quick to realize that their duties entail more than technical financial reporting (Olson, 1982, p. 15).[5] The public, often vacillating between over- and underestimating the depth and breadth of a profession whose services only begin with financial reporting, created a dubious role for the auditor.[6] The auditor is expected to report objectively what is often

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[5] See Chapter 2 of Olson (1982) for a brief synopsis of the litigation against auditors in the 1960s and 1970s and its impact on professional standards and the profession's ability to be self-regulating.

[6] In his presentation of accountants as business advisors, Grollman (1986) points out the array of business functions that accountants "have always served" (p. 3). Such activities include accounting systems, inventory control systems, electronic data processing, tax and estate planning, budgeting, and financial control and reporting systems.

either subjective or incomplete data—"reading between the lines" to discover the entire story behind a client's disclosure of the facts. As a spokesman for Arthur Young stated in the early 1900s, "What you (the client) have asked us for is not an accountant's report, but our business judgment on the entire business situation" (Edwards, 1960, p. 96). Often the public has insisted that the profession entail no more than bookkeeping (Belkaoui, 1985; Edwards, 1960). While in other instances, observers claim that "an accountant is paid for his judgment, not for his technical abilities" (Zug, 1951, p. 177). Indeed, the accountant's job contains both science and art; it includes not only reporting but synthesizing and offering unbiased judgments and opinions on financial information (Belkaoui, 1985).

At many points in accounting's history, standards and standards-setting bodies have been used to define the ambiguous role of the accountant. Realizing that the judgment required in accounting work can often obstruct objectivity and independence, aspects that are vital in accounting activities, standards-setters have sought to develop a solid industry-driven infrastructure that would place boundaries upon public expectations and guide professional behavior. Indeed, over 100 years ago, the British auditors[7] who recruited and trained the first U.S. bookkeepers and accountants encouraged the establishment of the first professional association in the United States, the American Association of Public Accountants (AAPA), to create a professional identity and to guide professional development. Displeased with U.S. accountants that they found to be "competent 'keepers of accounts' . . . (with) . . . diffuse practices (and) . . . little experience in giving opinions on financial data" (Chenok, 1988, p. 9), their British counterparts encouraged U.S. accountants to create a CPA title. The title was officially created in New York in 1887 as a way to differentiate the profession from the more technical "non-profession" of bookkeeping. The AAPA was given the responsibility to promote accountants as professionals who not only report factual information but also provide judgments based upon their technical reporting duties.

Clarification of roles and responsibilities has been the impetus for the skill standards developed in many of the industries involved in the current skill standards movement, especially in service-oriented professions or occupations. For example, the automotive industry developed an extensive set of standards in the 1980s for their

[7] British auditors came to the United States after realizing professional status as chartered accountants in their homeland. See Edwards (1960) for a description of the professional legacy that was handed to U.S. accountants from their British counterparts.

technicians. These standards, developed under the auspices of the National Automotive Technicians Education Foundation (NATEF), were initially established to assure quality or Automotive Service Excellence (ASE) so consumers would feel confident and could expect comparable service throughout the country and across dealerships. Automotive standards have been further refined in one of the 22 pilot projects funded by the U.S. Departments of Labor and Education to highlight the range and depth of worker skills required in the industry (NATEF, 1995).[8] One of the three items[9] developed by the National Council of Teachers of Mathematics (NCTM) (1991) offers professional standards or guidelines for teachers to use as they implement the new mathematical standards in their classroom. These standards describe the changes that must take place in the classroom if teachers are to effectively teach mathematics in an applied fashion that focuses more on investigation and problem solving and less on abstract concepts and rote memorization. They require teachers to share the burden of learning with their students. The standards developed by NATEF and NCTM are often used as exemplars in the standards movement. They make the point that standards can in some way codify work roles and establish a range of acceptable outcomes of performance that will increase consumer understanding and, therefore, confidence.

Judgment is perhaps one of the most difficult and important job functions to capture in standards—a difficulty that has emerged in accounting and will most likely emerge for standards-setters in all occupations and industries as organizations require more non-routine activities from their employees. Brown, Collins, and Thornton (1993) attempt to clarify the role of accountants by focusing on the types of judgment they are required to exercise rather than on the technical skills they must acquire. He classified an accountant's judgment as the following:

- *Semantic judgment*: applying standards to inherently vague concepts like transaction and control

[8] See Bailey and Merritt (1995) for an extensive analysis of the 22 industry-based skill standards projects.

[9] The three-part set of mathematics standards developed by the National Council of Teachers of Mathematics is comprised of *Curriculum and Evaluation Standards for School Mathematics* (March 1989); *Professional Standards for Teaching Mathematics* (March 1991); and *Assessment Standards for School Mathematics* (May 1995).

- *Pragmatic judgment*: making determinations on how people will react given that it is often difficult to specify clearly bounded necessary and sufficient conditions for applying concepts in abstraction from the purposes they are intended to serve

- *Institutional judgment*: possessing the ability to jump out of the system and analyze it externally, since there is no logical limit to the number of conditions that standards may incorporate (p. 275)

These types of judgments have become increasingly important for accountants over the past decade as technological advancements and complex business markets have further expanded their roles and responsibilities. Software programs available to most business organizations can now perform data collection and certain routine aspects of financial analysis—activities once performed only by accountants. Technology has forced accountants to broaden their scope of services and advise and direct client activities using data that the client can now collect and report. This broadening of accounting services moves in tandem with the need for more and better financial reporting mechanisms that have resulted from increasingly complex business environments. Before the growth, and ultimate collapse, of the stock market in the 1920s and early 1930s, audits and the pursuant financial reports were mainly a formality used most frequently by those inside organizations.[10] As corporations merged and grew, financial data became more difficult to decipher and the public became more reliant upon the outcomes of the auditor's labors to make their investment decisions.

Thus, historical and contemporary conditions have solidly grounded the auditor in an advisory role. Advising or consulting requires accountants to have a firm command of technical skills as well as the ability to apply traditional academic knowledge and utilize generic, employability skills[11] such as problem solving and teamwork to unique and often complicated situations. This is the common conception of professional responsibility, a conception that the accounting community has sought to institutionalize for the past century by mirroring the professional models found in medicine and law and establishing similar standards and education and examination processes. As the accounting industry has

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[10] This was one of the most important events in the establishment of management accounting as an accounting specialization requiring public accountants and auditors to assume more holistic responsibilities to their corporate clients.

[11] Generic, employability, or SCANS (named for the Secretary's Commission on Necessary Skills in the Workforce) skills will be discussed in more detail later in this report.

become less technical and more advisory, accounting standards-setters have grown more committed to increasing the use of educational credentials and national examination as prerequisites for professional practice.

Similarly, more advisory-type, "professional" activities and training are now being demanded of many nonprofessionals in high-performance work organizations (see Bailey & Merritt, 1995, for a detailed discussion of changing workplace and skill demands). Current and future workers must meet increasing skill and education requirements, work in more demanding and autonomous roles, and continue to update their skills as technology increases and the work organization changes. Actions taken by the NSSB support the idea of broadening and legitimizing the role of workers to allow them to function more effectively in high-performance workplaces. Instead of the traditional, narrowly defined industries and occupations of the *Dictionary of Occupational Titles* (DOT) and the Standard Industry Classification (SIC), the NSSB has established 16 broad economic sectors or clusters to guide standards development.[12] In addition, the NSSB has proposed a standards framework that stresses broader occupational classifications. As opposed to the traditional model that merely lists workers' immediate skills and duties, the NSSB recommends that future standards include the functions that workers provide in the organization, the roles workers assume as decisionmakers, and workers' contributions as team players. They also place more importance on broad-based, service-oriented duties to customers and to the organization. Developing skill standards in this manner sends a clear message that workers can and should become more self-directed professionals and not rely completely on management for direction and guidance, as the traditional assembly line model suggests. Accounting provides excellent examples of these trends as the industry has grown to embrace a more holistic function for accountants.

Efforts to obtain a broader role for accountants have forced the profession to re-examine the relationship between the types of skills that accountants use and need. The profession has attempted to establish, in school curricula and through examination questions and formats, a more realistic representation of the technical, academic, and

[12] The 16 economic sectors that the NSSB has developed are agricultural production and natural resource management; mining and extraction operations; construction operations; manufacturing, installation, and repair; energy and utilities operations; transportation operations; communications; wholesale/retail sales; hospitality and tourism services; financial services; health and social services; education and training services; public administration, legal and protective services; business and administrative services; property management and building maintenance services; and research, development, and technical services.

real-world skills that the profession requires. Technical and broad-based ethical standards have been established by myriad bodies inside and outside of the profession to guide professional activities, better define accounting duties for the general public, shield professionals from excessive liability, and avoid excessive government regulation. Generally Accepted Accounting Principles (GAAP), Accounting Series Releases (ASR), and various other public documents guide accountants' decisions and duties. Academic standards or core bodies of knowledge for accountants have been developed as a vehicle to structure the college curricula and justify increasing educational requirements. Academic standards, in many cases, include traditional academic and accounting subjects as well as business, humanities, and social science subjects to allow the accountant to become more of a generalist and serve the client in a more expanded capacity than strict technical skills would permit.

Investigating the triumphs and pitfalls that the accounting community has experienced in establishing this broad base of standards has a considerable relevance for those working to establish standards in other industries and occupations. Such a discussion will focus on the issues of incorporating technical, academic, and real-world skill standards and how those standards, once developed, can keep pace with an increasingly complex and changing workplace. The NSSB, in its attempt to create a standards framework, has emphasized these three types of skills as necessary for successful workforce development. Thus far, the proposed framework "requires that the skill standards the Board endorses consist of statements of the occupational, academic, and work-related skills required to competently perform the work specified at the core, concentration, and specialist levels . . ." (NSSB statement released 4/16/97, p. 5). Even though all of the pilot projects sponsored by the U.S. Departments of Education and Labor in the early 1990s included these three types of standards, none have established a certification exam such as the CPA exam that tests an employee's ability to use his or her skills. Furthermore, the NSSB has yet to exert its role in the standards-setting process, concentrating at this point on fostering the development of voluntary partnerships in the economic sectors or clusters they have established. These partnerships or coalitions comprised of employers, labor, educators, and community-based organizations will constitute a management structure that will guide the development of standards.

In the next section, the report will provide more background into the accounting profession by discussing the specialization that has occurred in the industry as a result of

the demand for more diverse services. This section will be followed by a discussion of the mechanisms and processes that the accounting industry has used to establish and maintain the technical, academic, and real-world skill standards of accounting professionals.

The Evolving Content of Accounting: Specialization, Standards, Education, and Certification

For the past century, the audit has been the mainstay of the accounting profession. Times have changed, however, and accountants have begun to capitalize on the fact that their intimate knowledge of a client's finances gives them a natural advantage in helping clients figure out how to improve their financial condition. The industry has looked for other ways to market accounting skills and services as well.[13] As AICPA Chair, Ronald Cohen, points out, the accounting community has been forced to "think beyond putting the rubber stamp of approval on stale information" and supply forward-looking information (Von Brachel, 1995, p. 65). The goal is to ensure that CPAs continue to be necessary to their client's business, establish new services for clients and management such as business consulting and specialization, offer long-range research and analysis, take on more responsibilities, seek out opportunities to serve clients, and speak out on public issues. As a result, specialized accounting services and consulting have grown.

Efforts to develop management consulting services in accounting are not new. They have been underway since 1957 when the American Institute of Accounting (AIA) began focusing on the potential for accountants to perform additional services for their corporate clients. Even earlier, in 1942, Arthur Andersen, one of the country's largest accounting firms, formed its first management information consulting division called administrative accounting. In the fall of 1994, the AICPA appointed a Special Committee on Assurance Services (SCAS) to "reinvigorate the audit function and stake out new economic territory

[13] The industry's interest in new service areas is, perhaps, predicated on occupational data that shows no growth in auditing. Nevertheless, in 1994, the U.S. Department of Labor's Bureau of Labor Statistics predicted that accounting would be one of the ten fastest growing industries during the next ten years. This growth can most likely be explained by auditing's close connection with consulting and specialty services that have recently experienced exponential growth as accounting services have expanded to cater to a more complex and demanding business community. For example, 25% of total combined revenues from Coopers and Lybrand LLP and Price Waterhouse (now merging) in fiscal year 1996 came from consulting (Burton, 1997). Arthur Andersen has created a two business unit infrastructure for its worldwide operations consisting of Andersen Consulting and Arthur Andersen. In 1996, $4.7 billion of Andersen Worldwide's $9.5 billion in revenues came from consulting (Arthur Andersen on the internet, 1997).

for the CPA profession" by transforming the audit into a "value-added service worth a premium price" (Pallais, 1995, p. 14). The Committee will emphasize auditor competencies such as independence and objectivity that the marketplace appears to value. A 1995 survey of managing partners and partners at CPA firms indicate that 88% of accountants feel that their firm's future requires either an industry or functional specialization ("Specialization Is Key to CPA Firms' Success," 1995).

Those that support specialization and the expansion auditor services point out that these services are a natural extension of the audit and can pay real dividends for clients. Indeed, the methods used by accountants are now being used in a wide variety of fields to service a wide range of clients. Examples offered by Berton (1996) include the following:

- Helping baseball and football teams determine whether their stadiums are located in the best places to generate income and are operated efficiently (requires location, real estate, marketing, and demographic studies)
- Providing quality assurance for drug testing for Olympic athletes
- Determining whether doctors are taking viable human eggs and embryos from women without their consent for research and implants
- Helping record companies and musicians receive music royalties (p. B3)

A new auditing service offered by KPMG Peat Marwick—the "business measurement process" (BMP)—provides another example of new accounting activities. The process, performed in conjuncture with regular audits, examines a company's annual financial results, including inventories and costs and revenue sources, to see if they meet generally accepted auditing standards and checks internal control systems to see if they control fraud and waste. In addition, the process allows auditors to tell clients how they rate their industries—for example, which are their best suppliers and which distribution channels are the quickest. The process includes interviews and fieldwork (Berton, 1996).

Responding to these changes, accountants are now developing new and unique areas of specialization, which in turn require new forms of education and certification.

Areas such as environmental and forensic accounting[14] allow accountants to become full service providers to their clients thus creating a new "consultant track" (AICPA, 1997). In order to stay active with future directions for accounting, AICPA Chair Cohen recognizes that "now more than ever, [the AICPA] must take on the responsibility to raise the level of CPAs skills, both in public and in industry, to create a value-added profession" (Von Brachel, 1995, p. 64). The AICPA has developed certifications for Personal Financial Specialist (PFS) and Chartered Financial Analyst (ChFA) to deal with increasing demands in the user community for consulting and segmented and comprehensive planning (Chesser, Moore, & Ghee, 1995). These certifications, controlled and promoted by the AICPA, enforce "the idea of a natural relationship between CPAs and financial planning" (p. 100). Likewise, the AICPA is attempting to compete with certifications such as Certified Financial Planner (CFP) and Chartered Financial Consultant (ChFC) offered in the financial community. The six-hour PFS exam, one of six requirements for certification,[15] is given in 250 U.S. sites and was held by over 1,200 CPAs as of May 1995 ("PFS Test Scheduled for September," 1995).

The proliferation of consulting services has made it clear to the standards-setting community that it is impossible to establish standards for every situation that may present itself to an auditor in a complex business environment. The complexity of the accounting environment has led some to conclude that accounting actually does allow for standards but that they are more like conventions that serve as guidelines for practice (Beresford, 1995). Conventions either become widely accepted and, therefore, used or get replaced. Thus, the term Generally Accepted Accounting Principles (GAAP) is applied aptly to the body of rules and procedures formulated on the basis of experience, reason, custom, usage, and practical necessity that define good accounting practice (Belkaoui, 1982).

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[14] Forensic accounting, investigative accounting, or fraud auditing is one of the hot growth areas for CPAs in public accounting. The area involves anything from setting up preventative systems to ensure compliance and avoid future claims and disputes, to handling the claims and disputes once they are made. It also allows accountants to look beyond the face value of accounting records and search for evidence of criminal conduct or the determination or rebuttal of claimed damages. Investigative accountants are also being used as consultants to advise companies on actions to take to remain solvent or declare bankruptcy.

[15] Requirements for the PFS certificate include a valid CPA certificate, good standing as a AICPA member, at least 250 hours per year of PFS practice experience for each of three years prior to the exam, statement of intent to comply with re-accreditation requirements (72 hours of CPA in financial planning every three years and completion of internal review questionnaire), and six references to substantiate PFS work experience ("PFS Test Scheduled for September," 1995)

Various industries in the current skill standards movement seem to appreciate the need to develop conventions rather than standards for their workers and are opting for a system that stresses good practice over an isolated list of skills and knowledge. Industries such as biotechnology, hospitality and tourism, and electronics have developed standards that describe the work in its workplace context rather than produce an abstract list of required skills. In their most recent attempts, these industries framed their standards around employee roles and responsibilities. The biotechnology standards developed 32 scenarios that include a routine situation and a pursuant problem. The employee is asked to demonstrate his competence and the accompanying knowledge and skills by handling the situation that is presented in the scenario (Education Development Center, 1995). Hospitality standards use snapshots of a worker's duties to illustrate required skills and the workplace dynamic in which the skills will be used (Council on Hotel, Restaurant, and Institutional Education, 1995). The electronic standards developed by the American Electronics Association (AEA) (1994) are structured around key purposes and critical functions of occupational areas or clusters of related jobs. A key purpose resembles a corporate mission statement that summarizes the bottom-line goal of an occupational area; critical functions indicate what must be done to achieve the key purpose. All of these standards are requiring workers to combine a variety of skills and handle the whole of an activity, not simply the individual parts as a list of "standards" would imply. The NSSB has directed the voluntary partnerships to describe work and develop standards for basic certificates in terms of critical work functions. Critical functions, as originally developed by the AEA, are "major chunks of work that must be performed and which, taken together, constitute the critical or principal responsibilities of the individuals involved . . . (not) a list of all the tasks required to perform the critical function" (NSSB, 1996).

Describing work and the skills that work requires in terms of critical functions and scenarios represents a drastic break from previous views of work and potential problems for those that are developing standards for the new workforce. This is especially true for the work performed by nonprofessional workers that was previously defined as a series of tasks directed by a supervisor or manager. Although accountants have always been given a certain amount of autonomy that was not offered to nonprofessional workers, the broadening and diversification of accounting services has created difficulties for accounting organizations that are similar to those that promise to arise for today's trade associations. The increase in specialized accounting services created a precarious role for organizations such as the Financial Accounting Standards Board (FASB) and the AICPA. These

organizations were established under the premise that there was some body of activity called "accounting" that could be governed and controlled in a centralized fashion. Indeed, the "profession's long-standing view was that a certified public accountant is competent to engage in all aspects of public accounting practice and that formal categories of specialization, therefore, are unnecessary" (Olson, 1982, pp. 191-192). Members of the AICPA fought to maintain a narrow view of accounting that they felt would preserve the pure nature of accounting services. In turn, the industry's professional associations hampered the development of specialized fields that threatened to bring more outsiders into the accounting environment and broaden the responsibilities of accountants (see Olson, 1982 for a detailed discussion of the AICPA's fight to exclude consultants from their membership and certification processes).

The new, complicated environment of proliferated services and skills has confused a firmly established standards-setting process. Indeed, the current head of the FASB, accounting's official standards-setting body, cites the constant "balancing act" that his organization must perform. The FASB must ensure that they are working on the right issues, weigh input from an ever-increasing number of constituency groups, and endeavor to reach answers that are as relevant and practical as possible (Beresford, 1993, pp. 70-72).

At the same time that FASB is confronted with increasing practical concerns that require timely answers, they are being criticized for their delay in producing a conceptual framework that will broadly govern accounting. A responsibility of the FASB for over twenty years, the accounting community and government regulators believe that such a conceptual framework will be more applicable to an increasingly changing and specialized accounting environment than a static set of technical standards or principles. In producing such a conceptual framework for standards for entry-level workers, the NSSB has also been criticized for taking too long to demonstrate tangible results.

The FASB and the NSSB have both proved that developing a conceptual framework is a slow and arduous process. They have also experienced similar difficulties in working toward an all-inclusive, exhaustive analysis to use as the basis for their framework (Delaney, Adler, Epstein, & Foran, 1996). Given a public policy community that is anxious for results, the NSSB has worked hard to allocate the necessary time to produce such a framework. In its attempt to get a thorough picture of the process, product,

and potential outcomes, the NSSB commissioned papers, held public forums, and brought in experts to analyze standards, work, work roles, assessments, and certifications. Beresford (1993) points out that the lag time between the need for standards and the time it takes to develop them is something that people do not realize or appreciate. When people fail to get immediate direction, they move on to the next dilemma, and, therefore, a conceptual framework fails to be produced. He also states that ". . . agenda setting is the single most important decision that we make at the FASB. Yet, for all the care that goes into this process, it may be one of our least understood and least appreciated activities" (p. 70). Clearly, the issues faced in the accounting standards-setting community for nearly 100 years are of extreme importance to the NSSB as it enters a time when educators, employers, and policymakers are clamoring for evidence of the NSSB's work. Although the FASB has failed to do so, it is imperative for the NSSB to prove to its many constituency groups that intangible research efforts as well as work in developing partnerships and coalitions is necessary for the future development and success of standards.

Given the proper foundation that comes from coalition building, research, and communication, a conceptual framework will allow an industry to look broadly at the activities it pursues and help it position itself for future changes. A conceptual framework in the accounting profession is intended to place boundaries around accounting activities, to determine whether the specific financial reporting decisions made by accountants yield benefits that are sufficient to compensate for their costs. Unfortunately, as Beresford (1993) states, the benefits and costs of decisions do not affect each constituent in the same proportions, and it is difficult to obtain objective and reliable information on which to base an analysis. The NSSB will, undoubtedly, face similar difficulties as it creates a framework or guide for industries to produce occupational standards. Is it possible to produce a conceptual framework that the NSSB can endorse that will meet the needs of all industries? Clearly, the FASB has tried for twenty years, without success, to produce such a framework for only one industry.

In addition to complicating the standards-setting process, the proliferation of specialties raised concerns in the accounting community about the credibility of an accountant's professional credentials. Accountants worried that the more business-like (as opposed to technical) accounting activities of management consulting and the like were perceived the more the public's faith in the independence and objectivity of accountants

would be threatened. In the beginning, accounting's professional associations avoided this problem. Professional organizations and societies not associated with accounting were given complete latitude to develop the formal professional designations, examinations, and education/experience requirements for the new specialty areas. Groups such as the Association of Government Accountants (AGA), the Financial Executives Institute (FEI), the Tax Executives Institute (TEI), and the Institute of Internal Auditors (IIA) had a strong presence in consulting and specialty services.

The level of outside involvement in accounting-related services, however, led to a series of educational dilemmas for the accounting community. The Commission on Standards of Education and Experience (CSEE) (AICPA, 1956)[16] was forced to grapple with the timing of specialized education and determine whether young CPAs should begin training in the highly developed specialties or in general practice activities that will provide the background to absorb the further specialized experience and training. In 1977, the AICPA's Board on Standards for Schools of Professional Accountancy felt it necessary to deal with the question of accounting education—that is, whether the education should differ for different career paths. As recalled by McGee (1987), the Standards Board "answered the question (of specialty education) safely, by stating that a single set of standards was equally relevant for all accounting career paths" (p. 37). Specialization, it was determined, would be developed after the common body of knowledge had been acquired. The outside organizations that had been created to handle specialty areas would not be threatened.

As the accounting community hesitated to confront and control specialization of accounting and accounting-related services, one issue became particularly troublesome. How can the accounting establishment limit and control organizations, inside and outside the accounting community, that establish their own training and certification for consultants? Arthur Andersen (1997), for example, has been privately training its staff to perform consulting services for at least twenty years. The corporation trains its staff in accounting procedures as well as in the client's businesses. Their training "focuses on the client's competition, products, services, key management and business issues, government regulations, systems, success factors, technology trends and more" so they can anticipate change, prepare for it, and help their clients manage it. As will be discussed in the section

[16] The American Institute of Accountants (AIA) first established the CSEE in the early 1950s. It was comprised of practitioners and members of the AIA, members of the various state accountancy boards and state boards of examiners, accounting teachers, and educational administrators.

on academic standards, it is not surprising that private companies felt the need for additional training given the fact that the formal education community has been slow in embracing many of the new trends in accounting. Most college and university accounting programs focus on traditional, narrowly defined accounting tasks, rules, and methods. The academic disconnection from the corporate environment has forced many private companies to act on their own as training providers for their employees. One reason for this disconnection may be the fact that the accounting standards-setting community has failed to create a strong set of guidelines for training and performance in these new roles.

Clearly, the accounting industry has failed to create the sort of seamless system of workforce preparation that the NSSB and others involved in current skill standards initiatives hope to establish. Employers feel that college graduates in accounting arrive in the job market without the proper skills to function in the high-performance workplace—skills that the school-to-work initiative and applied academic reforms are promoting. Instead, many students have a strong technical background with little experience connecting broader business issues to the technical aspects of accounting services. The NSSB (1996) has attempted to eliminate this problem by proposing that basic certificates function to certify the core knowledge and skills of workers as well as their concentration knowledge and skills.[17] Specialty skills and knowledge follow the achievement of these basic skills and form the most detailed components that target particular jobs and needs of specialized firms. But how will the NSSB respond when they are faced with organizations such as Arthur Andersen who will most likely fight any changes to their firmly established systems of training? Unlike the accounting community that has the AICPA as an organization that can develop certification mechanisms to compete with those of the non-industry sanctioned organizations, the NSSB is reliant on these organizations for their success. Not only will the NSSB have to attain consensus on and support for their framework for training and certification, they will have to propose an educational infrastructure that can accommodate the skills requirements they are promoting—an infrastructure that might be different from what is now established by industry. The following sections will focus on accounting standards and the issues that have arisen in the development of technical, academic, and real-world skill standards.

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[17] Core skills and knowledge, as stated by the NSSB, are those common to and essential for an entire, broad-based economic sector. Concentration knowledge and skills cover a broad area within each economic sector to be more targeted than the core level but less specific than the specialty level (NSSB, 1996).

STANDARDS FOR ACCOUNTANTS: THEIR DEVELOPMENT AND IMPLEMENTATION

Technical Skill Standards

The institutions that regulate the accounting profession have traditionally focused on accountants' technical skills. This is particularly true of agencies such as the Securities and Exchange Commission (SEC) whose activities have both empowered and restrained public accountants since the 1929 stock market crash (Edwards, 1960). The Securities Act of 1934 required that "public accountants" certify all financial statements filed with the securities exchanges. Not only did this requirement offer a new importance for the financial report functions of accountants, it firmly established a partnership between the SEC and private industry groups such as the FASB (Financial Accounting Standards Board) and the AICPA (American Institute of Certified Public Accountants) in the development of accounting skill standards. The Securities Act also made the preservation of the public interest a new aspect in accounting services.

The section that follows will discuss a certification process that has traditionally focused more on technical skills than on academic or real-world skills. The process has been plagued by turf issues and conflicts that are, perhaps, endemic in a profession that must balance corporate and public responsibilities. Many occupations that are now developing standards have similar potential conflicts to those affecting accounting. A discussion of the standards-setting process will be followed by a discussion of the CPA exam—an exam that is technical in nature and has been developed and implemented largely in the private sector (as opposed to in educational or regulatory institutions). Two final sections will focus on the establishment of ethical standards and CPE requirements in accounting as an attempt to decrease role ambiguity in the field and steer accounting toward a more professional direction.

The Standards-Setting Process

Who should set standards for an industry or profession? This is one of the most important issues facing the NSSB and those working towards a system of national, voluntary standards. Indeed, there is much at stake for the individuals who will be affected by standards as well as the institutions that have long histories of creating standards and certifying workers. Territory and authority may be usurped as the new movement demands

change and legitimizes new players. The complexities of accounting and the multitude of organizations involved in skill standards development and professional regulation and training provide a wealth of knowledge for those in other fields attempting to develop standards and certification mechanisms.

In accounting, professional organizations have taken the lead in setting standards for more than a century. Accounting associations actually began as regional efforts to establish professional designation for their members. Proliferation of such organizations eventually led to competition for power and membership. Ultimately, two professional associations carved out specific niches for themselves in a new, national arena, one focusing on the educational aspects of the profession and the other focusing on practitioner-oriented concerns. In addition, great effort has been directed towards the establishment of one "independent" standards-setting organization that would represent the profession and limit government intervention. Ultimately, the profession established the Financial Accounting Standards Board (FASB) as its lead standards-setting body. The American Institute of Certified Public Accountants (AICPA), the profession's practitioner-based association, however, has been hesitant to relinquish its standards-setting power to the FASB, a body that it was actually instrumental in creating. Another strong set of players or standards-setters in accounting is the 54 State Boards of Accountancy that ultimately control the activities of accountants taking place in their jurisdictions. Although they often follow national guidelines for practice established by the FASB, there is still considerable variety among jurisdictions regarding education and experience requirements for certification. Consequently, accounting's standards-setting structure has been shaped by internal conflicts and power struggles as well as by external interference from the business community and the government. The following sections will examine the key players in accounting's standards-setting process.

Professional Associations

Professional associations have played a central role in defining the necessary skills of accountants. They were established in the U.S. to (1) secure public recognition for accounting as a distinct profession, (2) raise education and experience standards, (3) ensure qualifications and ethics through uniform exams, (4) ensure public protection against unqualified practitioners, and (5) seize professional power through united actions (Edwards, 1960, p. 22). These professional bodies quickly proliferated and began

establishing their own identities. By the late 1800s, the two most prominent associations were the Institute of Accountants and Bookkeepers (IAB) and the American Association of Public Accountants (AAPA).[18] The IAB (later named the American Institute of Accountants—AIA) was incorporated in 1882 to evaluate and improve the intellectual advancement, commercial practice, and professional and social responsibilities of its members. For the first decade, it was devoted to the development of accountancy education and literature.

Being stung by criticism from members of the British Chartered Accountants who claimed that accountancy "had not materially progressed in public recognition" (Anyon, 1925, p. 7), a central goal of early accounting organizations was to raise the profile and status of accountancy in the United States. Unlike the IAB whose goals were more academic and oriented toward the internal needs of the profession, the AAPA (incorporated in 1887) sought to elevate the standing of accountants by promoting the advantages of their services to the public and safeguarding the functions they performed (Edwards, 1960). The AAPA's goal was . . .

> to associate into a society or guild for their mutual benefit and advantage the best and most capable public accountants practicing in the U.S.; and . . . promote the efficiency and usefulness of members of such society, by compelling the observance of strict rules of conduct as a condition of membership, and by establishing a high standard of professional attainment through general education and knowledge. (p. 55)

In 1896, these two organizations, opting to remain separate entities, put their differences aside and worked toward developing a unified piece of legislation to establish a professional and legal designation for accountants. Their legislative efforts led to the first statutory recognition of the CPA title in the United States, which included standards for age, examination, education, and experience.[19] For the next ten years, variants of this

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[18] These organizations were both incorporated under New York State laws. A third association, The National Society of Certified Public Accountants, was created in 1897. It merged two years later with the AAPA. The Federation of Societies of Public Accountants was developed in 1902 because accountants practicing in the western U.S. felt that the AAPA, based in New York, was not fulfilling its purpose as a national institute. The Federation merged with the AAPA in 1905 after it had firmly established the need for a national organization of accountants. The American Society of CPAs was formed in 1921 due to dissatisfaction with the policies of the American Institute of Accountants (AIA). It later merged with the AIA (Edwards, 1960).

[19] Given that "many of the CPAs at the time were self-made men who had had relatively limited formal education, but had through apprenticeship and self-study developed technical knowledge as bookkeepers and accountants" (Oliverio & Newman, 1996, p. 253), the Bill was drafted as "permissive legislation." It only restricted unqualified individuals from using the CPA title, not from practicing public accounting.

New York State law were established in Pennsylvania, Maryland, California, Washington, Illinois, and New Jersey. By 1924, all states had some sort of legislation in place to establish and regulate the practice of accounting.

The creation of new accounting societies eventually subsided, and two national organizations survived. The American Association of Accounting (AAA), founded in 1915 as the American Association of University Instructors of Accounting, ultimately became the more academic professional association and focused its attention on issues in accounting education, research, and practice. The AICPA[20], the nation's largest practitioner-based association, took "the lead in developing accounting principles" (Belkaoui, 1985, p. 51). The AICPA focused its attention on nationalizing the profession and spreading a knowledge and recognition of the utility and necessity for public accounting in national industrial and financial development (Edwards, 1960; Nau, 1921).

From the late 1800s, accountants realized the advantages of creating a uniform and accepted structure for accounting practice and certification that would protect the public as well as the accountant. As George O. May (1926), Chair of the AIA's Committee on the Development of Accounting Principles, pointed out, the precise accounting rules or conventions that are adopted by corporations are relatively unimportant to an investor. What is important, however, is for investors to know the method being used and be assured that the method is being followed consistently from year to year (p. 324). Thus, gaining the public's confidence and trust through a defined and uniform mode of operation was the motivation behind the first CPA legislation established in this country. As pointed out earlier, this is similar to the motivation behind the Automotive Service Excellence program developed by the NATEF (National Automotive Technicians Education Training Fund) to ensure customers that they will receive uniform services throughout the country, regardless of dealership or technician.

The AICPA now formally defers their power to the FASB, the official, independent standards-setting organization that they created in 1972[21] to replace an often criticized

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[20] The AICPA began in 1897 as the American Association of Public Accountants (AAPA). In 1915, the organization was renamed the American Institute of Accountants (AIA) and later became the American Institute of Certified Public Accountants (AICPA).

[21] Although the AICPA was instrumental in creating the FASB, the structure that officially funds and oversees the FASB is the Financial Accounting Foundation (FAF) that represents a broad base of

Accounting Principles Board (APB). The official relationship between the AICPA and the FASB is clarified by Rules 203 and 204 of AICPA's Code of Professional Ethics. The rules force AICPA members to comply with the authoritative accounting pronouncements of the FASB or to be prepared to defend their actions. They require that published financial statements be in conformity with established accounting principles, except in highly unusual circumstances.

The Government Sector

As the SEC and the Federal Trade Commission (FTC) became reliant on private accounting groups to answer questions on reporting practices of more complex corporations with more diverse ownership schemes, accounting standards became inextricably linked to public sector regulation of financial markets (Belkaoui, 1985; Edwards, 1960). In the early 1920s, the New York Stock Exchange's (NYSE) Committee on Business Conduct officially recommended that brokerage houses obtain periodic statements of financial condition for their stocks from independent accountants before attempting to list them on the exchange. Following this, the stock market crash of 1929 profoundly influenced the regulation of accounting services. Realizing that proper accounting methods and independent audits could have prevented many of the losses that took place during the crash, the NYSE worked together with the SEC and the AIA to lobby for the Securities Acts of 1933 and 1934. At the same time the Acts "gave the SEC the authority to protect the public interest by calling for the disclosure of adequate information when securities are exchanged and sold" they "gave birth to a sense of autonomy in the accounting profession" (Belkaoui, 1985, pp. 10, 149). The Securities Act of 1934 amended the 1933 Act and set forth the following:

- A transfer of securities administration from the FTC to the SEC
- A delegation of regulatory powers to the SEC relating to standards of accounting and financial disclosure of all corporations making public offerings of securities in interstate commerce through the mails and all corps registered with national security exchanges

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associations in business and investment, securities, and accounting communities. This structure imposes some sense of independence between the AICPA and the FASB.

- A requirement that financial statements filed with all Security Exchanges be certified by public accountants
- A removal of the cause for alarm among many accountants regarding liability (Edwards, 1960)

The Securities Acts of 1933 and 1934 allowed auditors, for the first time, to point to rulings of a government agency that set the minimum auditing and reporting standards. The client could no longer dictate what the auditor should include in his audits nor could he go to another accountant to get an audit more to his liking. The law affected "not only the standards of those (accounting) firms practicing before the SEC, but also those of the entire profession" (Edwards, 1960, p. 160).

In 1938, the SEC released a statement, *Administrative Policy on Financial Statements*, which established its reliance on the accounting profession to develop acceptable accounting procedures and principles for preparing financial statements filed with the SEC. The SEC stated that it would permit the establishment of accounting standards by the private sector and that the commissioner's intervention as the federal government's major participant in the standards-setting process would be in the form of cooperation, advice, and sometimes pressure rather than through rigid controls (Belkaoui, 1985). The SEC formally acknowledged its role as overseer not regulator and supported the view that the private sector can regulate itself more effectively than government. Two years prior, the AICPA set the wheels of private sector standards-setting in motion by forming the Committee on Accounting Principles (CAP) to minimize corporate reporting differences and eliminate undesirable accounting practices.

State and National Boards of Accountancy

Although many consider 1924 to be the year that accounting became a "national" profession (Belkaoui, 1985; Edwards, 1960), it is actually the year that the accounting profession officially became a conglomerate of territorial professions. By 1924, CPAs were required to adhere to standards and requirements set by one of the 54 American

licensing jurisdictions[22] in addition to abiding by the national rules established by the AICPA (its official professional association) and the SEC.

The 54 State Boards of Accountancy establish specific requirements (as laws and regulations) for becoming a CPA; determine the rights and obligations of a licensed CPA; and engage in research, promotion and public relations, CPE, and lobbying for the profession (Buckley & Buckley, 1974). They are administrative branches of government responsible for safeguarding the public interest by ensuring the competence and integrity of those who represent themselves as CPAs within their regions. Their actions and responsibilities are wide reaching. They evaluate the qualifications of candidates; administer exams; issue certificates and licenses to practice; promulgate rules of professional conduct; and investigate complaints, hold hearings, and take disciplinary action (AICPA, 1995; Belkaoui, 1985).

The State Boards officially (yet voluntarily) defer to the National Association of State Boards of Accountancy (NASBA) to coordinate their activities. The NASBA provides programs and services to assist State Boards in discharging their responsibilities and appoints a CPA Examination Review Board to annually review the preparation, grading, security, and administration of the exam. In addition, they assist the State Boards in processing grades and compiling jurisdictional and national statistical information on exam performance.

Tensions and Turf Battles in the Standards-Setting Process

Even though the SEC has formally conceded its standards-setting authority to the accounting community, they have not remained a silent partner in the development of standards for financial reporting. Throughout the years, the SEC has subjected the CAP and its successor standards-setting organizations—APB (Accounting Principles Board) and the FASB—to severe criticism (Beresford, 1995). In 1959, after widespread disapproval of the activities of the CAP by the SEC and other regulatory organizations, the AICPA reformed the CAP into the APB. The mission of the APB was to "advance the written expression of what constitutes Generally Accepted Accounting Principles (GAAP)"—a mission it was not able to accomplish to the satisfaction of the SEC (Belkaoui,

[22] Jurisdictions include the 50 states, Puerto Rico, District of Columbia, the U.S. Virgin Islands, and Guam.

1985, pp. 51-52; Edwards, 1960). The APB was replaced in 1972 with the FASB, a board whose stated mission is to "establish and improve standards of financial accounting and reporting for the guidance and education of the public, including issuers, auditors, and users of financial information" (Beresford, 1993, p. 72).

The FASB, still operating under similar criticism to that which plagued its predecessors, has set out to improve financial reporting by issuing standards that enhance the relevance and reliability of information used in investment and credit decisions (Beresford, 1995). Walter P. Schuetze, the SEC's chief accountant, recently commented on his fear that the FASB could be "legislated out of existence" ("FASB Looks Ahead . . . To What?," 1995, p. 16). Indeed, failure to please corporate America has resulted in actions to bring back government regulation. John Reed, Chair of Citicorp, stated in 1994 that he would ". . . rather have a regulatory agency that has other things to do include standards setting within their portfolio of responsibilities, as opposed to having a single purpose organization that has nothing to do but make accounting changes" (Beresford, 1995, p. 57). A 1996 *Wall Street Journal* article concludes that the "biggest threat to FASB has been itself" stating that the FASB (1) moves too slowly, (2) does too much by adding too many disclosure rules[23], (3) falsely claims "accounting purity," and (4) incorrectly uses the passage of time as rationale for an overhaul (Jenkins, 1996, p. A19). Despite increasing criticism of the FASB, Dennis Beresford (1995), Chairman of the FASB, cites various dangers involved in moving accounting standards-setting activities to the public sector:

- Interested parties would go around the FASB making the SEC an "appellate accounting court" for lobbyists
- Congress would be able to override SEC decisions; set accounting standards; and use accounting as an economic, political, and regulatory tool
- Moving the accounting standards-setting process to the political arena would most likely lead to less consistency and conceptual underpinning in accounting standards
- After being overruled, the FASB would lose support and motivation and constituents would concentrate efforts on influencing the SEC (p. 57)

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[23] Ray Groves, former chair of Ernst and Young calculated that if disclosure rules keep piling up, over the next twenty years the typical big company's annual report will have grown by 234% in pages and 1700% in footnotes.

Like the SEC, the AICPA has failed to relinquish its strong influence over standards setting despite its formal transfer of power to the FASB (Balkaoui, 1985, p. 52). The AICPA continues to be deeply involved with setting technical accounting standards, promoting broader educational and skill requirements, and overseeing professional behavior. As late as 1995, the goal of the new ACIPA President, Barry Melancon, was to create a "significant role for the Institute as standards-setter for auditing standards and as a participant in the accounting standards-setting process" (Dennis, 1995, p. 61). Four of the first five priorities in the AICPA's 1986 Mission Statement refer to education and professional skills and behavior:

1. Promoting uniform education and licensing standards for Certified Public Accountants (CPAs)

2. Setting requirements for maintaining members' professional competence

3. Providing standards of professional conduct and performance

4. Monitoring professional performance to enforce professional standards (Chenok, 1988, p. 12)

The AICPA's 1988 Plan to Restructure Professional Standards was comprised of six proposals to accomplish the following:

1. Strengthen the profession's code of ethics by providing members with basic ethical concepts to follow so they can maintain their integrity, objectivity, and competence

2. Mandate for firms in public practice participation in a program to monitor the quality of accounting and auditing work, which provides the public with an added measure of assurance that the firms have appropriate quality control policies and procedures in place

3. Establish education requirements so that users of CPA services can be assured that CPAs have been appropriately trained at the entry level and that the training continues throughout their professional careers (Chenok, 1988, p. 17)

Another recent ACIPA involvement with standards development began in 1983 when they joined forces with the NASBA to create a single piece of accounting legislation

to which state accountancy boards could adhere. These two prominent national associations formed a committee to combine and harmonize their accounting models.[24] Their efforts resulted in a Model Public Accountancy Bill in 1984 that was intended to be a forward-looking document with provisions that would gain the support of both public accounting and the general public. The bill was renamed the Uniform Accountancy Act (UAA) in 1992.

There are three explicit purposes for the UAA: (1) to eliminate differences between jurisdictions and the barriers that they pose to effective practice of public accountancy, (2) to protect the public interest, and (3) to promote high professional standards. It is uniquely designed to allow states to retain optimal legislative latitude. Rather than forcing states to replace their entire accounting legislation, the Act is comprised of separable provisions or parts that can be added to existing state laws at the states' discretion. The document is even given to State Boards in a loose-leaf binder. In effect, the document creates a skeleton (with blanks to be filled in), however, the AICPA and NASBA "strongly urge states to adopt the entire Act" (AICPA & NASBA, 1994, p. ii). The act is extensive. It addresses semester hours, accredited colleges, universities, schools, and programs; education; applications for examination; time and place of examination; examination subjects; cheating; renewal of certificates; experience; and continuing professional education.

Ronald Cohen, Chair of the AICPA, emphasizes the need to improve the relationship between the AICPA and state societies. One set of regulations will avoid duplication, increase uniformity, and avoid the confusion of students, educators, CPAs, and small and large CPA firms who must deal with the lack of reciprocity as they move and work across jurisdictions. In addition, such a state-based system hinders free exchange of information and professional knowledge across state lines and makes it impossible to grant foreign reciprocities to CPAs or their equivalents in other countries (Von Brachel, 1995).

Mr. Cohen's comments are not new. As early as 1907, members of the accounting community felt the need for federal recognition and regulation to accommodate the interstate and international character of the industry (Sells, 1907, p. 298). Since few businesses

[24] The AIA published a model bill to regulate the practice of accounting in 1916. A substantial number of state accountancy laws now follow principal provisions of follow-up bills written by the AIA's predecessor, the AICPA. In 1980, NASBA used the experience of its State Boards in administering existing laws to publish a Model Public Accountancy Act reflecting legislative policies.

operate solely within one location (state or even country), it follows that business accounts and accountants must have similar cross-state and country mobility. In addition, there must be some fundamental sense of consistency in the skills and qualifications of those practicing and the principles to which they must adhere (Von Brachel, 1995).

By 1915, the wide range of standards in various state laws became a great source of concern. It became obvious that "if the profession desired to achieve its proper place in the business community, it could not rely on state legislation alone" (Edwards, 1960, p. 87). Efforts were made to establish a national yardstick to attain "a reasonable minimum level in preliminary education and professional training" (p. 116). This led to restructuring the New York-based AAPA into the AIA, a national organization now called the AICPA. Unfortunately, establishing national regulation through a strong national association failed to minimize the states' rights to regulate the profession within their territory. Accounting still operates under a system of state-mandated controls similar to those established in the early 1920s. The AICPA does not supplant but supplements the state boards.

Similar potential problems exist with current systems of academic and technical standards that are often state-driven and governed. Despite recent attempts to develop national, voluntary standards systems, state industries and educational institutions have been working for years to develop and implement standards. Since education is constitutionally a state responsibility and there has traditionally been little national interference in the training of industry employees, these efforts and their outcomes, until now, have existed largely in isolation. Lacking communication and collaboration, state industry and academic standards are destined to be at different phases of development, levels of sophistication, and degrees of commitment.

The Building Linkages Project, an initiative sponsored by the NSSB, U.S. Department of Education's Office of Vocational and Adult Education, and the U.S. Department of Labor/Education's School-to-Work Office, is attempting to uncover the missing links between state-level academic and industry-recognized skill standards. Three consortia, with Utah, Indiana, and Oregon as lead states, will attempt to develop models for incorporating the academic and skill standards of 28 states and three industries or career

pathways (health, manufacturing, and business/management[25]) into school-to-work systems. The projects are focusing on six key areas:

1. Portability of academic and industry-recognized skill standards and certificates across industries and states

2. Efforts that reach out to all students, including those in nontraditional or alternative learning environments

3. Business, industry, and labor involvement in the development and use of skill standards

4. School-to-work career pathways that will enhance the ability of all students (traditional and nontraditional) to meet academic and industry-recognized skill standards

5. Activities in support of career pathways that involve parents, students, instructors, and trainers

6. Redefined roles and responsibilities for educational institutions and training providers that result from a standards-based system (documentation from Building Linkages Project, 1997)

It is not clear how the NSSB or the U.S. Departments of Education or Labor will use the information gathered in the Building Linkages Project; however, official project documents have made it clear that the choice of participating states and industries "is not an endorsement of state-developed, academic, or industry-based skill standards by the National Skill Standards Board" (documentation from Building Linkages Project, 1997). What is clear is that this project is an initial attempt to bring some sort of understanding, structure, and national recognition to disconnected state and industry efforts—efforts that may be duplicated attempts at similar goals.

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[25] Oregon's Workforce Quality Council is focusing on the academic and business skills found in Oregon, California, and Washington. Utah is working with health care and academic skills formulated in Utah, Arizona, California, Colorado, Florida, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, New Jersey, New York, North Carolina, Oklahoma, Tennessee, Texas, and West Virginia. Indiana has spearheaded the effort to integrate academic and manufacturing skills in Indiana, Arizona, Hawaii, Idaho, Illinois, Iowa, Kentucky, Maine, Maryland, Michigan, Nebraska, New Jersey, Oklahoma, Oregon, and Pennsylvania.

The Building Linkages Project is, perhaps, the most important effort in the development of a national system of standards; however, work such as this takes time and will most likely fail to produce tangible results immediately. Unlike the myriad demands that have kept accounting organizations such as the FASB from focusing on the development of its conceptual framework, the NSSB must continue to support and streamline efforts such as the Building Linkages Project. These efforts, if implemented properly, will avoid duplicated standards and allow for better communication and cohesion among currently disjointed efforts.

As illustrated by the accounting organization's attempts to find a central standards-setting body, turf battles are avoided, and tensions are minimized only with the development of a systemic infrastructure that can be accepted and adhered to by all constituencies. With the current movement to create skill standards for entry-level, technical workers still in its infancy, the General Accounting Office (GAO) (1993) released a report suggesting that the most important element of a voluntary skills certification system is industry ownership and control. They conclude that industry must have a proprietary connection with standards if they are to make significant financial investments in certification development and contribute the time and commitment required to implement and maintain a functioning, lasting system. Industry's governing role, they contend, will ensure their future interests which are vital to maintaining up-to-date systems.

The elimination of government control and the assurance that standards satisfy industry/practitioner needs has, perhaps, motivated private industry's support for the efforts of the NSSB. Instead of relinquishing control to the public sector to develop standards and their accompanying policies, trade associations are working *with* the NSSB and supporting their efforts to structure a standards system. Trade associations (over three quarters) directed 17 of the 22 pilot projects—the remaining five were directed under the auspices of education organizations.[26] Although different issues will arise as each industry develops, uses, and updates its standards, the balancing act to limit government control and maintain industry support is something with which standards-setters will most likely always need to contend.

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[26] See Bailey and Merritt (1995) for details on the pilot projects.

The CPA Exam

The national Certified Public Accountant (CPA) exam is the industry's oldest attempt to define the skills required of accountants, being a source of uniformity in the profession for nearly 100 years. Although the actual certification of accountants is under the jurisdiction of the states, every state uses the CPA exam and grading service administered by the Board of Examiners of the American Institute of Certified Public Accountants. The requirements of the CPA exam are updated periodically by national studies of public accounting practice and by evaluations of CPA practitioners and educators.

From the outset, accounting has used the CPA exam to establish "a measure of professional competence . . . and . . . evidence of professional qualification" (AICPA, 1995). Initially developed and administered by the Board of Examiners of the AIA (later the AICPA), the exam and grading service became available to states in 1917. Nine states used the exam the first year that it was available. By 1923, 40 states were using the exam. Today all states use the exam and grading service, and this has allowed CPA certificates of all jurisdictions to be substantially the same—"a condition that has enhanced the national prestige of the CPA designation and has aided the interstate practice of public accounting" (AICPA, 1995, p. 1). Candidates must answer machine gradeable, objective questions; supply written responses to essays; and present solutions to problems.

The exam reflects the generally accepted accounting principles recognized by the SEC. It originally contained four separate sections: Business Law, Auditing, Accounting Theory, and Accounting Practice (Flynn, Leeth, & Levy, 1995). Currently, the two-day, $15^1/_2$ hour exam is structured around sections in (1) Accounting and Reporting, (2) Auditing, (3) Business Law and Professional Responsibilities, and (4) Financial Accounting and Reporting (Business Enterprises). All sections test the candidate's analytical skills for the following:

- Examining information and identifying data relevant to the situation
- Assessing materiality and identifying risk
- Identifying and explaining auditing procedures, accounting and reporting situations, and potential legal issues

- Understanding and evaluating information technology
- Evaluating situations, formulating conclusions, and making recommendations
- Preparing auditing and accounting findings, conclusions, and recommendations (AICPA, 1995)

The Accounting and Reporting section requires candidates to demonstrate their knowledge of federal taxation, accounting for government and not-for-profit organizations, and managerial accounting. The Auditing section tests candidates' knowledge of generally accepted auditing standards as well as the skills to apply them. In the Auditing section, candidates are tested in the context of four broad engagement tasks: (1) evaluation of the client and the engagement, (2) obtaining and documenting information to form conclusions, (3) review of the engagement to assure that objectives are achieved, and (4) preparation of communications to satisfy objectives. The Business Law and Professional Responsibilities section tests knowledge of the legal implications that relate to accounting and auditing; whereas, the Financial Accounting and Reporting section requires candidates (1) to demonstrate knowledge of the concepts and standards found in financial statements; and (2) to recognize, measure, evaluate, and present the items found in financial statements in conformity with GAAP (AICPA, 1995, 1997).

Although the exam is primarily designed to test the technical abilities of candidates, it also assesses the candidate's writing skills on the essay questions in each of the three sections. Although writing only accounts for 5% of each section's total score, its inclusion perhaps indicates the increasing importance of academic skills for the accountant. The candidate's writing is judged for (1) coherent organization, (2) conciseness, (3) clarity, (4) use of standard English as defined in *The Business Writer's Handbook* (punctuation, spelling, and diction), (5) responsiveness to requirements of the question, and (6) appropriateness for the reader (AICPA, 1995).

Much like the industry-driven skill standards to be endorsed by the NSSB, the CPA exam is based on an analysis of workplace activities. Unlike many of these initiatives, however, the CPA exam is created and administered by accountants—actual practitioners. Many of the industry skill standards efforts do not allow workers (practitioners) to play a large role in the standards-setting process, leaving them to review lists of skills developed

by managers and job analysts (Bailey & Merritt, 1995). Despite criticisms of the CPA exam (discussed in the next section), the fact that practitioners are so instrumental in its development has added legitimacy to the exam and the credential that it produces. It stands to reason that, given the lack of involvement that current industry workers have experienced in skill standards and assessment development, they will be less supportive and respectful of certification than accountants who feel somehow connected to their standards and assessment tools.

Problems with the CPA Exam

Attempts to establish consensus on the specific content of the CPA exam were at times problematic even though the idea of a uniform examination was readily accepted throughout the country. Many felt that the exam was originally developed to serve as a gatekeeper to protect the profession against states with weak education and skill requirements. This concern produced an exam that was pitched at a relatively high level that many believed was too technical and biased toward applicants fresh out of accounting school—giving unequal advantage to those with a formal education versus those with practical experience (AICPA, 1956; Edwards, 1960). After changes were made to make the exam applicable to the requirements of over 30 state boards of accountancy, many accountants found the exam to be too easy and felt it did not deserve to be ranked alongside examinations in law and medicine (Meade, 1907, p. 193). A nearly one hundred year old commentary in one of the profession's lead journals reflects this:

> It has long been a reproach to the Accountancy profession in the United States that the examinations proposed for admission into the profession are exceedingly elementary and in no way comparable with the examinations for admission into the other learned professions. . . . The questions in commercial law can readily be answered after a few days of "cramming" from some elementary text books . . . These are questions in bookkeeping, and their answers demand no very high order of intellectual attainment. . . . With few exceptions, candidates for the CPA degree passed the examinations in commercial law, auditing, and theory of accounts generally with high marks. Very few, however, pass the examination in practical accounting. . . . The examination in practical accounting demands of the candidate the working out of puzzles rather than the solution of problems. Even interpreted in the most kindly spirit, the practical accounting examination is an examination for accountants' assistants and not for accountants. (Meade, 1907, p. 194)

Criticisms of the exam continue to this day. For example, a 1984 study by Dunn and Hall found that accounting work experience did not improve scores on the

examination, suggesting that the exam was not closely related with the workplace activities of accountants. According to this view, despite practitioner involvement in its development, what is covered on the examination is not consistent with what the workplace requires of accountants.

The AIA Board of Examiners aims to set the competence level for the exam to that required for general and auditing practice in a medium-sized organization (Information for CPA candidates, American Institute of Accounting, 1954, p. 3, as cited in AICPA, 1956, p. 90). Currently, however, the exam is seen as being more of a barrier to professional practice than other professional tests with only ten to fifteen percent of first-time takers being successful in passing the exam. Twenty-five to thirty percent of candidates are never successful (Dunn & Hall, 1984). This has implications for the quality of education accounting graduates receive as well as the quality of the examination.

Although the CPA exam is much more sophisticated than a multiple-choice test with closed-end and specific answers, its ability to assess successful work performance is frequently criticized. For example, the test has been considered a "poor indicator of accounting competency" because it contains material that the average accountant will never encounter (McGee, 1987, p. 13). Despite the use of practice questions and samples from the field, the test is also criticized for focusing on the ability to recall and explain detailed rules and procedures and testing memorization of basic concepts. Critics complain that the test neglects higher order learning and thinking skills such as synthesis and evaluation. Furthermore, success on the CPA exam is often used to measure the quality of accounting programs. This can put pressure on educators to teach to the exam and focus on details of currently acceptable practices instead of working with students to develop higher order thinking skills (Flynn et al., 1995).

These problems are all familiar to standards-setters in the contemporary skill standards movement who are now attempting to develop assessment tools for their standards. Many believe that current conversations on assessment tools and strategies should have taken place during or before standards were developed. Perhaps this would have changed the complexion of the standards and created a more tangible dialogue between the employers that were demanding skills and the educators that must teach and evaluate the skills. Indeed, although few argue over the importance of real-world skills

such as high order thinking, problem solving, and teamwork, there is little consensus on exactly how to evaluate these skills now that they have been identified.

Despite the criticism that exists over the components of the CPA exam, the exam does illustrate the possibility of designing and administering, on a mass scale an assessment instrument with complex essay questions that allows for one or a finite set of correct answers. It also suggests, however, that even such a complex exam is not likely to be adequate as an assessment that can be used to meet all of the objectives of skill standards and training. A closer look into the specifics of the CPA exam will give further insights into the assessment process as contemporary standards-setters work toward this phase of certification.

Ethical Standards To Minimize Accountants' Role Ambiguity

Public accountants have an unusual role. Although they are in the private sector, they perform a public service by certifying information that forms the basis of decisions made by the public—that is, people who are not officially considered their clients but use their "unbiased" information to make investment decisions. Therefore, independence and objectivity in accounting are valued as highly as technical ability. Although official legislation such as the Securities Act of 1934 gave legal recognition and guaranteed the importance of accounting services, many accountants became "worried about the burden of responsibility that was thrust upon them" (Edwards, 1960, p. 157), being aware that "In the public's mind, the work of an accountant must be faultless in execution and principle" (p. 97).

As a result, accounting organizations have developed a professional code of ethics, a type of standard, to gain public legitimacy, create public trust, and provide a sense of synergy among professionals. Ethical standards provide the practitioner with more than just a set of behavioral codes to guide their specific duties and responsibilities; they give clients some boundaries for their expectations and, thus, put clients at ease about the responsibilities they have entrusted to professionals. For example, the Hippocratic Oath, taken by physicians upon graduation from medical school, is more about overall obligation to the patient than specific physician tasks to be performed.

Judgment and public service are embedded in the AICPA's Code of Professional Ethics. The Code stresses the importance of a moral schema over standardization and regulation (Preston, Cooper, Scarbrough, & Chilton, 1995, p. 508). Its principles address accountant responsibilities, public interest, integrity, objectivity, independence, due care, and the scope and nature of services. The principles section is intended to encourage members to go beyond the minimum framework of rules to support a strong spirit of professionalism. The rules section constitutes the enforceable part of the Code and is categorized into five series concerned with independence, compliance, relations with clients (including confidentiality and contingency fees), and regulation of internal relations.

More recently, in 1996, the AICPA developed new auditing standards regarding the disclosure of material fraud in an attempt by the accounting community to promote their image of protecting the public. The proposed rule, scheduled to become a new auditing standard in mid-1997, would "require them [auditors] to do the job expected of them by the public" (Burton, 1996a, p. C2). More stringent than congressional securities legislation that included a similar provision, the rule requires auditors to communicate the suspicion of fraud more quickly than presently required. Likewise, the SEC created an Independence Standards Board in 1997 to address the public and private concerns that are facing auditors as they move into more of a consultant role. Individual accountants, as they ground themselves in their new role, are seeking the adoption of broad principles that will allow firms to develop their own "codes of conduct" (Abelson, 1997, p. C1). The SEC, on the other hand, is seeking more clarification and formal differentiation of the lines that separate the various accounting-consulting activities.

Clearly the accounting profession has an unusual quasi-public role which makes ethics particularly important. The new consulting role has made ethics even more important. While it is difficult to evaluate the effects of a formal Code of Ethics, there is some tentative evidence that accountants enjoy a reputation for high ethical behavior and the ability to be independent and objective authorities on financial information (Chenok, 1988, p. 17).[27] Although other professions may not share the same public role, ethics play an important role in all occupations, and it is certainly worth encouraging standards-setters to include ethics in their deliberations and planning.

[27] This evidence comes from a survey commissioned by the AICPA, so its conclusions should perhaps be viewed with some skepticism.

Continuing Professional Education

Like most professions who establish requirements for continuing professional education (CPE), the accounting community requires its members to participate in a predetermined number of seminars, workshops, or meetings to remain in proper standing with its primary professional association, the AICPA. Accountants require CPE to maintain their status as a licensed practitioner in the professional community and to stay active on current topics, techniques, and issues affecting the industry. The AICPA offers a wide variety of CPE self-study and video courses in areas such as accounting and auditing, management, consulting services, personal development, taxation, computer-based training, and specialized knowledge and applications. The AICPA even offers mail-order credit through a program called "CPA Direct" where applicants complete study guide examination questions based upon articles published in the AICPA's *Journal of Accountancy*. The AICPA makes it clear, however, that State Boards of Accountancy have the final authority to determine the number of credit hours allowed for a particular program as well as the classification of courses under their specific licensing requirements.

The NASBA and AICPA have been working together and independently to promote uniform, national standards for CPE programs for certified accountants (Haberman, 1995). The AICPA has established a Continuing Education Standards Subcommittee to promote uniform requirements across states. Although state variation still exists, the Uniform Accountancy Act has made exact recommendations on the amount of hours of CPE required for certificate renewal. The Act does leave many of the details up to the individual states, however. The Act states,

> For renewal of a certificate under this Section an applicant shall show that the applicant has completed 120 hours of continuing professional education which contribute to the general professional competence of the applicant during a three-year period with a minimum of twenty hours each year. The Board may prescribe by rule the content, duration, and organization of continuing professional education courses that qualify for this requirement. The Board may also provide by rule for prorated continuing professional education requirements to be met by applicants whose initial certificates were issued substantially less than three years prior to the renewal date, and it may prescribe by rule special lesser requirements to be met by applicants for certificates renewal whose prior certificates lapsed substantially prior to their applications for renewal, and regarding whom it would in consequence be inequitable to require a full compliance with all requirements of continuing professional education that would otherwise have been applicable to the period of lapse. (p. UAA-6-2)

Furthermore, the Act adds this comment:

> This provision for mandatory CPA as a condition for renewal of certificates is an important provision of this Uniform Act aimed at assuring that persons licensed under the Act maintain an acceptable level of current knowledge in their field. When establishing credit for all courses, State Boards should acknowledge the equal importance of courses to CPAs who offer specialized services other than traditional public accounting to their clients or employers, and maintain the professional expertise of CPAs who offer such specialized services, including CPAs in industry. (p. UAA-6-3)

The movement to require more CPE has been criticized for not specifying the content of that education. Many consider the variation in substance of CPE across states to be problematic. McGee (1987) points out that some states even allow dinners to serve as CPE courses. Clearly, it will be difficult to prove the effectiveness of most CPE courses in maintaining a CPA's knowledge and ability to perform successfully in the workplace. Some assessment of the courses being offered to CPAs is, however, the only way that employers and employees can be certain that their time and money is being well spent. Clearly, this is one aspect of CPE that the accounting community needs to consider as it promotes the development and utilization of such courses—an aspect that skill standards developers in all industries must consider if their standards are to be maintained and updated with workplace changes.

The emphasis that the accounting community places on CPE is reflected in the philosophies of many industries that promote lifelong learning for their workers. Indeed, as technology advances and business environments change, workers will need to stay abreast of new and better ways to function in the workplace. Job skills will continue to increase as technology changes organizational structures and employee responsibilities, leaving those individuals who fail to adequately prepare themselves out-of-work. The need to continually develop new skills and acquire new knowledge is as real for an accountant as it is for any worker in a high-performance workplace—both must use technology to diagnose a client's problem and provide a solution.

Summary Remarks

To stay competitive in new global, technologically advanced, high-performance work environments, *all* industries are being forced to redefine the technical skills of their employees as well as the tools used to assess those skills. This is as true for accountants as it is for production workers who are experiencing a drastic expansion in their duties and

responsibilities. It is no longer sufficient to require employees to demonstrate technical skills that are framed as narrowly defined tasks and routine methods/procedures. Instead, to be effective in the workplace and satisfy customer and organizational needs, employees must be able to apply their technical skills to handle an increasingly diverse, nonroutine set of situations and events. In their more autonomous and evolving roles, employees must commit themselves to continually learning and increasing their skills and must become more concerned about general issues such as ethics, effective communication, and positive public relations that were once the responsibility of management-level employees.

Broadening technical skills poses great problems for those who develop assessment instruments for certification. Although few will argue about the necessity of skills such as problem solving and communication, few have been able to capture their depth and breadth in evaluation situations. Accounting's CPA exam, established and utilized for nearly 100 years, is being subjected to increasing criticism for not representing changing workplace demands. This is in spite of the fact that practitioners have developed and are updating the exam. Clearly, additional time and thought needs to be devoted to the assessment process if the certification is to be valued by other practitioners and consumers.

Academic and Real-World Skills

Although private sector standards-setters have been primarily concerned with the development of technical skill standards, over the years they have dedicated some of their efforts to the creation of standards for academic training. Their attempts have sent two strong messages regarding the demands for accounting education. First, the accounting community wants accountants to leave formal schooling with more real-world skills than college and university programs have traditionally provided. Second, the accounting community believes that the key to professional status and acceptability is more formal training. Unfortunately, educational institutions have often worked against attempts to make instruction more applied. In addition, the profession, grounded in an apprenticeship tradition, has been slow at making education a formal requirement that replaces or supersedes the importance of experience. This section will discuss continuing attempts in the accounting community to create a more applied college curriculum and increase the duration of formal academic training for accountants.

A Push for Real-World Skills in Academic Training

For nearly 100 years, professional organizations in accounting have attempted to establish a formal educational path that would produce accountants that were ready for the workforce. In the early 1900s, the American Institute of Accountants (AIA) and the American Society of Certified Public Accountants (ASCPA—later the AICPA) made education an important part of their charters. The AIA was established "to promote education in the science of accounts and in practical application of that science throughout the U.S. and its territories and possessions" (Edwards, 1960, p. 141). The ASCPA set out ". . . to stimulate education for all accountants now certified and those who are working to earn their certificates" (p. 135). Societies promoted more, better, and nationally consistent education. It was generally believed that the wide variation across states in education, experience, and requirements for CPA exam candidacy resulted in ". . . confusion, in differing interpretations of what a CPA is, does, and how he is designated, in lack of coordination of the educational programs of our colleges and universities with the educational needs of the profession, and in some cases in charges of discrimination, monopoly, and 'closed shop'" (AICPA, 1956, pp. xxii-xxiii).

The 64th Annual Meeting of the AIA in 1951 formally discussed such issues and initiated the creation of the Commission on Standards of Education and Experience (CSEE) in 1952. The CSEE was established to study the diversity that existed across state boundaries and "bring about more uniform and more realistic standards for the qualification of CPAs" (AICPA, 1956, p. v). Uniformity was to be brought about in the following ways:

- By providing a background analysis of the accounting organization and the services provided in accounting
- By discussing and proposing the best methods of preparation and recruitment for the profession
- By influencing weaker schools to provide sounder formal education programs for the profession
- By providing legislative bodies and state boards with suggested minimum education and experience prerequisites for accreditation of CPAs (p. viii)

In the early 1950s, the Committee on Selection of Personnel of the AIA established four standards for success in public practice:

1. *Character and Independence*: personal qualifications of objectivity, independence of thought, integrity to render an unbiased, objective report with full disclosure of pertinent facts

2. *Mental Attributes*: intelligence to handle diverse types of work; judgment to make decisions about extent of work, accounting principles, and methods of applying principles and reporting results; accuracy of observation, thought, and expression, including careful, orderly thought, and ability to express precisely and accurately and communicate the significance of numerical information; and analytical ability to analyze voluminous and complicated aspects of bus transactions; activities center around collection, collation, classification, and summarization of data from which opinions are reached

3. *Breadth of Knowledge*: ability to work successfully with people from different backgrounds; ". . . Technical training is of course important, but CPAs (and businessmen) are beginning to realize that a broadly trained person is, in the long run, likely to be a better prospect for employment than the individual with only technical training" (AICPA, 1956, p. 19)

4. *Human Relations*: concern with communication and exercise of considered judgment

Unlike GAAP that the CPA exam assesses, these standards emphasize the less technical aspects of accounting service. Perhaps, the sentiment behind these broad-based standards was presented more succinctly by the remarks of an analyst who stated,

> Even more important than technical skills, we need to teach our students to think analytically and globally. This, in turn, implies the need for them to have stronger grounding in economics, finance, and quantitative analysis, not less. And we need to teach them to communicate effectively. This includes developing their "people skills" such as teamwork, sensitivity training (especially to other cultures), and leadership. (Choi, 1993, p. 423)

The broad skills and areas of knowledge that the accounting community appears to be promoting are similar to the SCANS[28] skills that have played a large role in current efforts to develop industry skill standards. Five of the six skills that the AICPA published in their website as "the skills needed for a successful accountant/CPA" are SCANS skills—problem solving, creative thinking, understanding business systems and computers, people skills, and high ethical standards. SCANS skills also include generic workplace competencies such as identifying, organizing, planning, and allocating resources and acquiring and using information. SCANS (1991) also identified the following foundations skills: reading; writing; performing arithmetic and mathematical operations; listening and speaking; thinking skills such as creativity, making decisions, solving problems, visualizing, knowing how to learn; and reasoning and personal qualities such as displaying responsibility, self-esteem, sociability, self management, and integrity and honesty. These skills have been classified as "employability skills and knowledge" by the NSSB and defined in their proposed framework as the skills and knowledge needed to function effectively in all high-performance work environments.

In the 1960s, the American Institute of Certified Public Accountants (AICPA) established the Beamer Commission to define a Common Body of Knowledge (CBOK) for accounting.[29] The study endorsed a CBOK that included a broad range of topics such as behavioral science, economics, the humanities, law, math, probability, statistics, and functional fields of business.

In the late 1980s, the Accounting Education Change Commission (AECC), established by the American Association of Accountants and funded by the "Big Six" accounting firms, recommended an even broader list of skills areas than the Beamer Commission. The AECC's list extended the types of skills to include (1) a general cultural background, (2) business administration and economics, (3) written and oral communication, (4) standards of professional conduct, (5) principles of accounting (not

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[28] In 1991, the SCANS report, published by the Secretary's Commission on Achieving Necessary Skills, examined the demands of the workplace and questioned whether American students could meet such demands. The Commission concluded that the high-performance workplace required higher order thinking and problem-solving skills—skills beyond those traditionally taught in schools (U.S. Department of Labor, 1991).

[29] The AICPA and the Carnegie Corporation of New York sponsored the first Beamer Commission in 1963. Results of the Commission were published in *Horizons for a Profession* in 1967.

accounting procedures), and (6) principles and standards of auditing. The AECC also suggested how these skills might be best taught and learned:

1. A general cultural background could best be gained through university or college work.

2. Business administration and economics, an understanding of basic economic principles, production, marketing, finance, statistics, and business law, can be acquired more quickly and effectively through formal academic training.

3. Written and oral communication can be integrated into course material.

4. Standards of professional conduct can be developed by incorporating instruction and guidance into all phases of accounting programs and not devoting a specific course to the subject.

5. Principles of accounting (not accounting procedures) are best learned by exposure to actual operating conditions and practices in the workplace.

6. Principles and standards of auditing can be better understood with exposure to actual accounting operations through internships or the like.

Based on its findings, the AECC recommended that students obtain a broad education integrating all aspects of the accounting discipline with an emphasis on real-world problem-solving and enhanced development of communication and interpersonal skills (Palmer & Gilfillan, 1996). These recommendations are similar to the "all aspects of the industry" stipulations found in the 1990 reauthorization of the Carl D. Perkins Vocational and Technical Education Act and the 1994 School-to-Work Opportunities Act. Instead of focusing on traditionally, narrowly defined jobs, programs funded under these Acts were responsible for exposing students to a broad range of occupations and career opportunities offered within industries. In this way, students could gain a better understanding of the industry as well as its employment requirement and academic and technical demands.

The AECC (1994) was to serve as a catalyst to stimulate demonstrable improvements in the education of accountants through curriculum restructuring, the development of alternative educational processes and materials, and effective utilization of

faculty resources. Comprised of twelve educators, three representatives from business/industry, and three representatives from public accounting firms, it has become instrumental in shifting the emphasis in accounting education courses away from a preparer perspective (dealing with mechanics of recordkeeping, formatting, and following rules and procedures) and toward a user orientation. This perspective allows accounting students to better understand their role in business and society as well as their responsibilities to supply and use information for decisionmaking purposes. A broad-based, customer orientation is also an effective way to alter the non-accounting student's image of accounting and attract students who had not previously considered accounting as an option. The Commission also acts as a forum to identify, examine, and discuss issues related to academic preparation of accounting professionals and provides the focal point for assimilating and synthesizing the interests, concerns, and priorities of various interested parties regarding improvements in higher education in accounting. The AAA, its lead body, has allocated $2.5 million to thirteen colleges to revise and develop accounting curriculum and teaching methods (Flynn et al., 1995).

In stating directives for the AICPA in 1995, Chairman Ronald Cohen included the AECCs formula for a competitive profession. First, Cohen stated that the profession must attract talented people—those who are amply paid and capable of offering value-added services to clients. Second, the profession must be committed to proper education. This requires an academic community that is attuned to what the profession needs, better integration of education with practice, and increased education requirements—all done on a national level (Von Brachel, 1995).

The desire to attract more productive workers and better train them by teaching more real-world skills is also found in many of the industries involved in the current skill standards movement. A majority of the 22 industry-based skill standard pilot projects started in the early 1990s identified SCANS skills in their skill standards. Interviews with project directors indicated an indisputable need for these real-world skills if industries were to transform themselves and their workers. Despite this indisputable promotion of SCANS skills, there is no established, statistically validated method to assess such skills. Efforts to do so, however, are taking place in organizations such as American College Testing (ACT).

Problems Developing Accounting Curricula

Despite the apparent consensus among members of the accounting community that accountants need broad-based skills to function effectively in the workplace, the community has failed to reach agreement about how those skills should be classified and taught. Several issues have complicated a specific discussion of accounting curricula. First, the ambiguity surrounding exactly what accountants do has created disagreement over what they need to know and how they should learn. Second, the constant broadening of accounting activities has made it difficult to develop timely education, especially when educators in colleges and universities often lack contemporary marketplace experience that they can bring into the classroom. Third, even to the extent that planners have understood what accountants need to know, the relationship between that body of knowledge and abilities on the one hand and any educational program on the other is not always clear. All of these issues are common to the occupations and groups that are trying to set standards and determine the most effective strategy to equip aspiring practitioners with appropriate skills.

In the late 1980s, the Accounting Education Change Commission (AECC), established by the AAA and funded by the Big 6 accounting firms, investigated the reasons why employers (particularly the large accounting firms) appeared to be displeased with the caliber and abilities of new accounting graduates. They also sought to identify why accounting programs were not able to enroll quality students. The AECC was directed to "change accounting education in such a way that many of the brightest students will decide to major in accounting" (Carcello, Copeland, Hermanson, & Turner, 1991, p. 1). Its official mission was to

> . . . be a leader in improving the academic preparation of accountants, so that entrants to the accounting profession possess the skills, knowledge, and attitudes required for success in accounting career paths . . . to enhance the quality of accounting education . . . (to) foster continuing improvement in the education of accountants by working in collaboration with other stakeholder organizations. (AECC, 1994, p. 3)

Their findings indicate the prominent feeling that most current college accounting programs are not appropriate for today's business needs. AECC cited too little emphasis on the following:

- accurately reflecting practice by integrating all aspects of the accounting discipline throughout the curriculum

- avoiding the one-right-answer syndrome by reflecting real-world problem solving
- focusing on learning how to learn
- developing students' communication and interpersonal skills to ensure that students are active participants in the learning process (Williams, 1993, p. 77)

The findings of the AECC, when compared to many earlier studies that focused more on narrowly defined skills, represent the ambiguity that exists in the profession's view of itself and its requirements for practice. The 1974 Whitman study of 546 randomly selected practitioners and managing partners in CPA firms found that the respondents favored a relatively narrowly defined education focused on procedural skills. Among other things, the accountants who were surveyed tended to believe that there was too much emphasis on conceptual understanding rather than the acquisition of procedural skills. This resulted in less proficient entry-level accountants. They also stated that there was no need to teach beginning CPAs the history of SEC laws since this was information only used by seasoned accountants in financial reporting for publicly traded companies. The ability to diagram an information system, they felt, was superfluous. There was no need for a background in economics. Reducing the requirements for behavior-oriented classes could also save time (McGee, 1987).

The training that young accountants need for the workplace is often not available in the classroom since practitioners are often not the ones teaching college and university courses (McGee, 1987). Academic accountants, those with Ph.D.s in accounting, often do not represent the partners in CPA firms and officers in accounting's professional associations. The disjunction between accounting educators and practitioners is further demonstrated by the fact that accounting has established two primary professional associations—one for accounting educators and one for accounting practitioners. It stands to reason that the educators that train students may not be the individuals with the most recent technical expertise but rather academic researchers who study more long-range conceptual concerns (Leisenring & Johnson, 1994). There is, therefore, a huge gap that emerges in training; it is difficult for academics to teach the practical skills they do not deal with on a daily basis.

According to one critic of accounting education, practitioners "assert that the accounting graduates they are receiving do not possess the necessary skills, and educators state that students should be educated for life, not for a particular job" (McGee, 1987, p. 1). This disparity was proven in a study in the late 1980s that indicated that students encountered different workplaces than the ones for which educators prepare them. A survey of accounting students six months from graduation and accounting professionals with 1.5 to 3.5 years of experience, indicate that students expected to use more broad-based skills such as communication and interpersonal relations than semiseasoned practitioners found they needed (Carcello et al., 1991). Students' expectations were higher than individuals with workplace experience, especially in the areas of public service provided to clients, on-the-job opportunities to learn more about business, perceptions of the profession by the general public, and overall interesting aspects of the profession.

There are clear parallels in the issues facing accounting educators who attempt to prepare an accounting curriculum that resembles today's workplace and education reformers who attempt to restructure curriculum to utilize applications from the workplace that will better engage and motivate students to learn. How does an educational program require rigorous academic skill standards and at the same time train workers with the high level of technical skills that will allow them to enter the workplace ready for work? Even though accounting educators often have more academic credentials than practitioners, their professional activities and occupational exposure does not necessarily offer them opportunities to remain current on the "nuts and bolts" of accounting activities. This is a dilemma that is confronting the school-to-work movement as reformers attempt to develop applied curricula that are less relevant to academic teachers who lack exposure to the business community. McGee (1987) points out that these issues do not seem to be present in training programs in other professions such as law and medicine because practitioners are also student instructors. Medical residents are trained by the same doctors who hold attending positions at hospitals and law students take their courses from professors who often spend part of their time as partners in area law firms. Likewise, the dissertations of students pursuing Ph.D.s in the social sciences receive their instruction from professors that have pending research projects and strong ties to the research community. These fields have been able to close the practitioner/educator gulf that has hurt accounting and is becoming an obstacle for current education reform movements such as school-to-work.

A similar gulf between educators and practitioners (employers) has taken place in contemporary workplace reform efforts. In the 22 skill standards pilot projects, for example, educators, considered one of the three key stakeholders in skill standards development (along with employers and union representatives), tended to become involved late in the skill standards development process when curriculum and assessment were being planned and discussed. Educators, on the whole, were not active in the development of the standards themselves. (See Bailey & Merritt, 1995, for a detailed discussion of the skill standards development process for the 22 pilot projects.) A 1996 NCRVE conference, *Integrating Academic and Industry Skill Standards*, brought together educators and employers to discuss their attempts to develop academic and technical standards. Ironically, what was perceived to be "conflicting" goals of educators and employers proved to be misperceptions resulting from a lack of communication and coordination—not major philosophical differences. Relying on word-of-mouth or second-hand communication, educators and employers are often misinformed about the priorities that each place on the skills required for the world of work or, simply, the world.

Many employers believe that educators are training students according to an esoteric and abstract view of education. To the contrary, educators feel they are responsible for developing well-rounded citizens who possess a variety of skills, including the ability to perform productively in a wide range of possible career options in the workplace.[30] In the same vain that employers believe that educators are too concerned with abstract, conceptual, or "academic" skills, educators consider employers' goals to be short-term and narrow. They often hesitate to get employers involved in the educational process for fear that employers will narrowly define educational goals that meet their immediate workforce needs and consequently pigeon-hole students into dead-end jobs rather than promising careers. More opportunities for partnership will remedy these misperceptions and promote the seamless system that all reformers appear to want.

A Battle for "More" Accounting Education

Attaining "professional" status through education has been a long-standing preoccupation of accountants. Although for years experience was the primary source of accounting training, the accounting community has grown to believe that requiring a strong educational background is the most effective strategy for gaining the status afforded other

[30] This is based on the comments of an English professor who attended the conference.

professions. College education slowly stopped being a substitute for experience as it was when the profession was first established in the United States. One accountant wrote in the *Journal of Accountancy* in 1905,

> If the accountant is to be simply a man of figures, expert in practical calculations, adept in finding mistakes in trial balances, and similar routine matters, and in detecting an erring cashier or bookkeeper, he will occupy a respected and useful position in the community, but he cannot claim for himself the rank of a professional man. A profession has been well defined as a calling which demands of its members a high order of intellectual attainment which can be acquired only by long and arduous preliminary training. (Sterrett, 1905, p. 2)

Ironically, states and even national organizations were slow to formally require increased education for accountants. Experience, as will be discussed below, was often used as a substitute for education and, therefore, minimized the importance of exact educational standards for professional practice. Despite the fact that 13 universities and colleges had accredited courses in accounting by 1906 (Allen, 1927; Oliverio, 1996), it was not until 1945 that the AIA Committee on Education even recommended that candidates have a high school education (Leland, 1945, p. 228). Although most major universities offered business administration degrees with a major in accounting by 1920, only seven states required general education beyond high school by 1959 (Edwards, 1960). At that point, Connecticut, Florida, New Jersey, and New York required four years of college study. California, North Carolina, and Tennessee required two years of college study (AICPA, 1956, p. 13).[31] Clearly, the profession had not made much progress in standardizing educational requirements. Approximately ten years passed before accounting education again became a topic for discussion. This time, the movement was to make the professional education of accountants more like the education of other professionals—namely physicians and attorneys.

The Beamer Commission's second report in 1969 concluded that, at a minimum, it would take a CPA five years to obtain all of the elements in its recommended "common body of knowledge" (McGee, 1987). In 1974, the AICPA's Commission on Auditor's Responsibilities (the Cohen Commission) extended the amount of time required to complete an accounting program further, recommending that individuals admitted to the AICPA

[31] New York State passed a law in 1929 that by January 1, 1938, every candidate for examination for the CPA certificate must be a graduate of an approved course of study at the college level. The course must include half liberal arts subjects and half professional studies with a minimum of 24 hours in accountancy, 8 hours in commercial law, 8 hours in finance, and 6 in economics (Edwards, 1960).

complete a four-year liberal arts undergraduate program and a three-year graduate professional program (Alford, Strawser, & Strawser, 1990; McGee, 1987). In 1983, the AICPA's Committee on Standards of Professional Conduct (the Anderson Committee) proposed a five-year educational requirement for all CPAs. The Committee's official 1986 report, *Restructuring Professional Standards To Achieve Professional Excellence in a Changing Environment*, makes the completion of a 30-hour program beyond the bachelor's degree a requirement for individuals applying for membership in the AICPA (Alford et al., 1990). This requirement, now commonly referred to as the "150-hour rule," was approved by 82% of AICPA membership in 1988, and the bylaws of the AICPA were amended to include the rule (Flynn et al., 1995). It is to take effect by the year 2000. The 150-hour rule is now accepted by most states. Data published by the AICPA indicates that 35 states have implemented or plan to implement the 150-hour rule by at least January of the year 2001.

Research by accounting organizations has suggested that bachelor's and graduate degrees do increase chances for success in the accounting profession. In 1981, the Commission of Professional Accounting Education, a broad-based committee comprised of representatives from the American Association of Accounting (the national group of accounting educators), the American Institute of Certified Public Accountants, the American Association of Collegiate Schools of Business (AACSB), the National Association of State Boards of Accountancy, and the Federation of Schools of Accountancy, set out to validate the recommendations for additional training for CPAs. The Commission evaluated how CPA exam performance and promotion records varied by educational level—bachelor's and graduate degrees. Their study revealed that CPA exam candidates with graduate degrees were more successful than those with BAs and were promoted more rapidly within firms. A 1994 study of CPA candidates in Texas found that SAT scores, accounting GPA, hours of self-study, and graduate accounting hours had significant and positive relationships with exam performance (Dunn & Hall, 1984). Wright (1988) found that MBAs advanced more rapidly to all levels of the accounting firm implying that post-baccalaureate education may enhance an individual's chances of success in public accounting practice. Alford et al. (1990) studied partners in Big 8 accounting firms and revealed evidence similar to that of Wright. The study showed that post-baccalaureate education enhances the probability of success in public accounting firms. Almost 45% of partners in U.S. offices from 1978 to 1987 held graduate degrees. The study indicates that graduate education has become more important over time as a greater percentage of partners with graduate degrees were found from 1983 to 1987 than from

1978 to 1982. Surprisingly, fewer auditing partners (29.9%) held graduate degrees when compared with consulting/management (65.4%) and tax (57%) partners. This disparity may reflect an age difference between the groups, but it may also suggest that accountants engaged in consulting need a broader educational background than those focused on the more narrowly defined auditing activities.

Problems in Emphasizing More Education

Despite consensus for increased educational requirements, there has been some opposition voiced to the 150-hour rule as it is now stated. Many employers and educators question the necessity of increasing education, especially without agreement on what actually constitutes the additional education—structure and substance. Moreover, accounting firms differ in their needs. Small firms, for example, may be concerned about the costs (increased wages) that additional training implies. They are in less of a position to use many of the broader-based skills that such programs could provide because many focus on traditional accounting services. Large firms, on the other hand, want a more integrated curriculum and more training in the liberal arts and general employability skills since they are in better positions to take advantage of these new skilled employees.

McGee (1987) argues that those requiring additional education only serve to restrict entry to the field, thus giving consumers fewer options. Instead, he recommends the use of subject matter and not "seat time" as the criterion for education. Flynn et al. (1995) state that, although the requirement specifies the amount of additional education required, no specifics are placed on the type or form of education to take place during that time. Indeed, the amendment, although making time frames uniform, does nothing to add uniformity to a structure that varies so significantly across schools and states. Thus, accountants and their organizations are having difficulty understanding that simply increasing educational requirements will not guarantee professional status or better professional performance from practitioners.

These issues are also present in the current skill standards movement, as reformers have become more concerned with the outcomes of education than they are with the traditional inputs. Secondary and postsecondary education reform movements at local and state levels have also been striving to achieve accountability and some sense of uniformity in their educational processes. While increased technology and new workplace demands

have clearly given support to increased educational requirements, structuring those requirements around traditional measures such as seat-time, GPA, class rank, or Carnegie Units has lost appeal in many reform circles. Instead, many areas of the country are moving toward more competency-based approaches to student training and assessment. Basing education on solid knowledge and skill requirements (standards) provides students with clear indications about what they should learn and offers clear data to employers on what employees are capable of doing. Although there are many fears regarding the "teaching to the test" phenomenon, standards-driven training and assessment will undoubtedly force education to become more accountable to various constituencies and make education more comparable across regions and schools.[32]

Experience Requirements Compete with Education Requirements

> ". . . it is unrealistic to assume that an experienced CPA can ever be produced entirely through the academic route." (AICPA, 1956, p. 56)

Experience is a firmly rooted aspect of an accountant's education. Indeed, most early accountants received their initial training via an apprenticeship model that, at least primarily if not solely, utilized workplace experience. Even after educational programs in accountancy were strongly established in universities throughout the country, states continued to view accounting experience as vital to successful practice and considered it a substitute for recommended educational experiences. Emphasis on increasing the professional status for accountants, however, has created tension between those who believe in the importance of workplace experience and those who stress more college level, academic training.

As early as 1900, most states made experience a requirement in the practice of accounting. An AAPA bill in 1916 required five years of experience, at least two of those years in public accountancy. In 1945, an AIA committee recommended two years of experience for college graduates. In the 1950s, the Commission on Education and Experience re-established the importance of experience for CPAs. Their recommendations focused on practical applications in the classroom as well as internships while in school and practical experience following admission to the CPA exam. Indeed, the Commission clearly stated that an accountant who was designated as a CPA on the basis of prescribed education

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[32] See Bailey and Merritt (1997) for a discussion of competency-based assessment strategies as they are being used to address many of the issues surrounding school-to-work reform.

preparation and satisfactory completion of the exam was not an experienced practitioner (Edwards, 1960, p. 225). By 1956, all but three jurisdictions (Delaware, Montana, and Nebraska) required practical experience of one to five years for eligibility to sit for the CPA exam, for issuance of the CPA certificate, or for a license to practice as a CPA. Based upon published AICPA data, all states still require at least one year of experience in either public or private accounting to hold a license to practice public accounting although the actual requirements vary significantly by state.

Similar to formal and CPE requirements, critics of experience requirements in accounting argue that they fail to specify the nature and quality of the work that must be performed. Simply specifying an amount of work experience, without providing additional parameters, can lead to very different acquisitions of skills and knowledge depending on the nature of the work being carried out.

The uncertainty about the quality of work experience is also a problem for current school reforms such as the School-to-Work Opportunities Act that encourage internships. In most school-to-work programs, there is very little control over the nature of the workplace experience. Given that workplace experience is a sound pedagogic tool, parameters need to be established regarding the characteristics of that experience. The Institute on Education and the Economy is currently investigating the characteristics of employer participation in school-to-work programs to determine the motivations of employers involved in work-based learning activities.[33] Simply establishing time requirements for work-based training will not necessarily provide students with the quality of training that they need—schools must work with employers to structure programs and establish educational benchmarks that will create the strong connections between the workplace and the school.

To gain the kind of control and understanding of the work experience that school-to-work implementers must gain, the Accounting Education Change Commission (AECC) established an Early Employment Experience (E^3) Task Force in the late 1980s. The Task Force was to develop a strategy to improve the interface between the education of new accountants and the first two to three years of employment experience. It was to make certain that "the improved educational outcomes fostered by the AECC dovetail neatly with complementary changes in accounting practice" (Elliot, 1991, p. 119). The E^3 Task Force

[33] This NCRVE-sponsored study will be available in 1998.

also set forth a set of recommendations designed to improve the transition from education to practice and the nature of the early experience:

1. Transition from education to practice:

    a. take advantage of the opportunities to blend study and practice more effectively to minimize the abrupt transition from student to practitioner through internships, cooperative work-study programs, and employers' release of summers in the early career for full-time studies

    b. provide internships to students for a better understanding of the business world; a better appreciation and integration of subsequent education; more realistic expectations of the workplace; and more informed employment choices

2. Changes in personnel management:

    a. eliminate lock-step pay, promotions, and job evaluations that focus on traits rather than skills

    b. teach employees how their work fits into the big picture by explaining how assignments meet organizational objectives and the implications of various findings and outcomes

    c. institute upward evaluations of superiors to increase the sensitivity of superiors to the developmental needs of their workers and help them become more effective bosses instituting mentoring (Elliot, 1991, pp. 116-117)

According to Elliot (1991), three major functional changes must take place in accounting organizations if they are to upgrade the educational value of the early work experience, become more consistent with student expectations, and function more effectively overall. First, accounting needs to be considered less labor intensive and more human capital intensive. Employees must no longer be considered a substitutable expense to be minimized but rather as valuable human capital to work along with information-technology capital and be treated as an asset that must be developed and protected. Second, the new organic organization must replace the old industrial, inverted-tree structure with

standardized products, interchangeable parts (including workers), and cost minimization all connected to market share. This organic network consists of people and their specialized content- and network-process knowledge. Organizational components become more specialized, differentiated, and valuable as information and customer or client demand becomes more complex and specialized—they are no longer interchangeable. Third, the type of accounting information must be reconceived so that the accounting enterprise will be broadened to provide decision-support information adaptable to the demands of the customer and necessary to establish a value-creating environment in which robust, challenging, fulfilling careers in professional accounting can be realized (p. 119).

Thus, there continues to be a tension between the realities of accounting practice and the ideals of accounting for which some educators hope to prepare their students. This also reflects the variation in practice among accounting organizations. As in many other industries, some firms have introduced innovative human resource practices while others maintain a more traditional approach. How skill standards can correspond to future employer needs (on the assumption that firms will move towards innovative organizational practices) or still be consistent with the needs of the current majority of employers who maintain more traditional practices is a problem that the NSSB must also tackle.

An additional concern for the NSSB and those involved in school-to-work transition programs, a concern that the accounting community has also failed to sufficiently address, is how to make the workplace experience an integral part of the formal educational process. Indeed, accounting programs have not been as successful as other professional schools such as medicine, law, and engineering in using workplace experiences to integrate the academic and technical skills learned in the formal education portion of a student's professional development. Medical students, for example, are required to take part in internships, residencies, and often fellowships that are at least as long as their medical school training. Likewise, law students are strongly encouraged to take part in clerkships during their summers in law school. While not a formal requirement in most law schools, experiences in law firms and judges' offices are known to increase the competitive advantage of students entering the job market. Engineering students are also encouraged to participate in cooperative (co-op) experiences at some time in their college experience.

For all of these professions, the workplace experiences provide an opportunity for the student to bring together all of the abstract and conceptual pieces of information

accumulated during their coursework and become the diagnosticians and independent practitioners that the public expects. Without this workplace opportunity, as has been previously mentioned, accounting students are disillusioned by a workplace that the educational system did not correctly represent and employers are disappointed with the skills of their new recruits. Employers who hire high school students for entry-level technical jobs experience similar disappointment as students come to them without the skills necessary to successfully tackle problems and confront situations that do not have one correct, textbook answer. Clearly, this is one area of most education, training, and certification programs that needs great improvement. The effects of the detachment of the educational system from the accounting community also add strength to the current school-to-work arguments that emphasize more and better institutionalized workplace experiences for youth.

CONCLUSION

Throughout this report, parallels have been drawn between the historical standards-setting process in accounting and contemporary efforts to restructure standards in a wide range of industries and occupations. Although the efforts of the NSSB have generated a great amount of support for what many consider to be a new activity, the standards-setting processes in many U.S. industries have histories that nearly equal accounting's 100-year legacy. Contemporary efforts directed by the NSSB and various educational agencies have one unique characteristic that separate them from past attempts to develop higher standards in schools and workplaces. Unlike historical trends that tend to dichotomize the restructuring of work and school, those involved in current workplace and education reform initiatives recognize and support the development of solid links and partnerships between key stakeholder groups such as educators, employers, union representatives, and community-based organizations. Efforts to develop stable partnerships have led to a more natural integration of education and workplace reform efforts. For example, the joint sponsorship of the 22 industry-based skill standards pilot projects in the early 1990s signifies an unprecedented partnership between the U.S. Departments of Labor and Education. Strong bonds now seem to be emerging between the National School-to-Work Office and the NSSB as they work together on initiatives such as the Building Linkage project.

Although the accounting profession has been successful in creating a widespread, national system of skill standards and assessments, the community has not succeeded in developing the same type of seamless preparation system that contemporary workplace and education reform efforts now require. What follows are some of the lessons that the accounting profession's extensive experience with skill standards and assessments can offer for those groups that are now working toward education reform and a national system of industry-based skill standards.

1. Skill standards developed for high-performance, professional workplaces have philosophical obstacles to overcome.

Efforts to broaden accounting skill standards and re-align educational requirements have presented reformers with a series of philosophical obstacles that go beyond the actual development of high-performance standards and requirements. Individuals

and organizations have been forced to rethink traditional definitions of work and appreciate the boundaries that traditional industrial categorizations have created. Furthermore, in order to promote the full development and maturity of high-performance workplaces, those involved with contemporary skill standards development must understand the cultural changes necessary to expand the often-limited roles held by individuals in traditional occupational hierarchies.

These philosophical adaptations are particularly difficult for industries that have operated in isolation and pigeonholed workers into narrowly defined, technical job responsibilities. Workers' roles must be expanded so that they will be encouraged, allowed, and required to apply all of their skills and knowledge (technical, academic, and real world) to more proactive, more expansive, less supervised, and less routine job responsibilities. Standards must not be merely tolerated; organizations must be educated and convinced that the drastic restructuring and the development of different relationships between and among workers and managers is not only beneficial but necessary for success and survival in a new, competitive global economy. Assessment tools and educational programs must be developed so that employers and educators can be confident in a worker's ability to perform proactively with minimal supervision. Workers must become lifelong learners, willing and able to stay current on technological and workplace changes.

2. **Standards setting must be an ongoing and constantly evolving process that emphasizes continual communication between stakeholder groups.**

In rapidly changing industries, standards can actually become obsolete before they are published and well before educational programs can be adjusted to prepare students appropriately. Standards-setting efforts that dissolve after an initial set of standards has been produced have doomed those standards to imminent obsolescence. Even worse, groups that support such one-shot activities may eventually hold people to standards that fail to represent reality. Standards, assessment, and training tied to such a static certification process has little, if any, worth to practitioners, educators, employers, or the lay public. In the end, the most valuable contribution of the standards-setting process may simply be the continuing dialogue between practitioners, employers, customers, and educators. The most

important characteristic of any standards-setting process is that it promotes, or indeed requires, constant updating and communicating.

The accounting community's criticisms of their own educational system and examination process offer evidence of the problems that can arise from a lack of consistent communication between stakeholder groups and periodic revisions of all aspects of the certification system. The disjointed relationship that exists between accounting's education and practitioner communities has slowly eroded the confidence that has traditionally been placed on accounting's professional credentials (the university diploma and CPA exam). The CPA exam, no longer capable of evaluating all of the broad-based, advisory responsibilities that accountants must assume, is not supplemented by a dynamic educational system that can adjust its curricula with changes in the marketplace. Employers are dissatisfied with the inadequate skills and abilities of their new recruits. Students are dissatisfied with their poor preparation for and lack of understanding of the workplace. Educators are frustrated by the mixed signals they are receiving to stay abreast of new workplace dynamics, yet continue to produce research that has long-term, conceptual implications.

Solid and continuous input from both practitioners and educators is required if education and workplace requirements are to be constantly re-defined and re-aligned. A strong complementary relationship must exist between standards, training, and assessment activities. A technical credential such as the CPA exam will contribute more to the status of the profession if the practitioners developing and updating it work with academic educators who can share their knowledge of a wider range of disciplines and improved assessment techniques. Accounting curricula will, in turn, be improved if educators work more closely with practitioners to construct a learning environment in which students are required to demonstrate broad-based competencies that are consistent with changing workplace expectations.

The current skill standards effort, under the direction of the NSSB, must strive to create a system comprised of educational and assessment components that can and will be continuously updated and improved. The 22 skill standards pilot projects were required to develop partnerships between educators, employers, and labor unions and allocate time and resources for periodic updates. Unfortunately,

employers took an early leadership role in the development of standards in the pilot projects and sought to involve educators in the process only when it moved toward the development of curricula and assessment tools. Educators, for the most part, were handed a final document from which to develop support materials without much industry background or knowledge to guide them. Furthermore, the pilot projects appeared to establish a process that offers only vague plans for keeping the standards current. Perhaps taking lessons from these early attempts to establish standards-setting processes, the NSSB funded the development of industry coalitions or voluntary partnerships in 1997. These partnerships, which were established early in the process, will constitute a project management structure that will ultimately guide system development. Although the development of standards is to remain industry-driven, key stakeholders must be involved in all phases of the standards-setting process so that their input can be considered and included throughout the development of standards, curriculum, and assessment tools.

3. **Professional workplace performance requires standards that offer conventions or conceptual guidelines rather than narrowly defined methods and procedures.**

It is hard to deny the parallels between the professional evolution of accountants over the past century and the current movement to professionalize the workforce in a wide range of U.S. industries. As is now the case in many contemporary industries, accountants are required to perform an increasingly broader set of duties that offer less guidance and more ambiguity. Accounting jobs now require skills such as the ability to judge, problem solve, investigate, clarify, and communicate—what contemporary skill standards developers refer to as SCANS skills. The complexity and depth of these skills cannot be adequately represented by technical standards that merely list and measure the performance of isolated tasks and procedures. Instead, standards must offer guidance for the professional workforce and a conceptual basis for which to make non-routine, intricate activities and decisions.

Despite the difficulties that accounting standards-setters have experienced in attempting to develop standards systems that reflect broader responsibilities, the call for them grows. Although there is no agreement on the form and format of such standards, accountants, employers, educators, students, government regulators,

and the lay public appear to support standards that resemble conventions or conceptual principles rather than narrowly defined rules and procedures.

Unlike the Financial Accounting Standards Board (FASB) that has not made significant progress in their attempts to create a conceptual framework for accounting, the NSSB has proposed the guidelines or standards framework that will be used to endorse the standards created by voluntary partnerships. Their framework, comprised of core, concentration, and specialty knowledge and skills, provides a consistent structure and terminology for those developing the standards. It is broad enough so that standards-setters can develop the specific skills and competencies of the standards in an autonomous and independent fashion. If anything, the structure for standards, as it is being developed by the NSSB, will gain the support of the various stakeholders since it embodies the philosophy that skill standards need to be industry-driven and flexible enough to adapt to the changing demands of the high-performance workplace. Standards, although there is no empirical evidence to support them, are thought to play a central role in a new system of education and workforce preparation by providing timely and accurate information to educators, employers, and workers.

4. **A solid standards-setting system requires strong support from constituency groups and adequate time for planning, research, and experimentation.**

Skill standards do not function in a vacuum. They affect many individuals and organizations. The success and sustainability of standards systems demands adequate time for initial planning, research, and experimentation. Standards-setters need to understand and appreciate the sweeping effects of their efforts: the threats standards pose, the territories that will be infringed upon by standards, and the dynamics that surround the institutionalization of standards. Understanding such issues requires time and coherent direction. More importantly, understanding requires solid communication and support from all of those involved.

The accounting profession has often been given inconsistent signals from government regulatory agencies and the public regarding their latitude to set and govern their own standards. Although the FASB has been established as the profession's sole standards-setting body, it is constantly criticized for taking too

long to establish standards. Regulatory efforts often threaten to overturn their power and authority.

The NSSB has taken proactive steps to guarantee the support of the constituency groups that, if not supportive, could ultimately present insurmountable obstacles for the development of a national system. First, the NSSB has established itself as the governing body that will endorse, direct, and promote standards, but that it will not develop and implement the standards. Second, the NSSB has, since its inception, stressed the importance of firmly establishing voluntary partnerships among those that will be ultimately responsible for the skill standards and certification process—educators, employers, union representatives, and community-based organizations.

Despite a master plan that appears to be well-planned and orchestrated, the NSSB may suffer from many of the difficulties that the FASB experienced in attempting to develop a solid basis for and understanding of the standards-setting process before acting. Without proper understanding, the NSSB may be accused of acting too slowly, addressing the wrong issues, and handling issues incorrectly. They must, therefore, stress the necessity of adequate time to develop and pilot test different aspects of a national skill standards system. Although not used to produce tangible results, having adequate time will allow the NSSB to avoid costly mistakes that could jeopardize the entire effort.

5. **Certification has potential positive and negative effects that must be balanced.**

With the expansion of accountants' duties, the certification process in accounting has been subjected to increasing criticisms for not reflecting actual work experiences—a well-known controversy in all certification systems, especially those in which certified practitioners have traditionally had limited formal responsibility. Narrowly defined assessments do not provide all of the information that consumers need to make informed decisions and therefore fail to protect public interest by limiting risks. They limit consumer choice by decreasing the supply of practitioners and, therefore, increase the prices that consumers must pay for services. Although there is no established gauge to monitor the magnitude of these disadvantages to consumers, advocates of the current national skill standards movement hope that the negative aspects of certification will be minimized by the

benefits that a better trained workforce offer to society and individual consumers. In addition, the NSSB's new certification scheme resembles more of a stepladder approach to certification than a one-time examination. Workers will be progressively evaluated as their knowledge becomes more occupationally specific (after attaining broad- and industry-specific skills). Their credentials and job opportunities will match their level of skill advancement.

Despite the potential for certification to act as a gatekeeper and keep supply down and drive up the prices of services, it has many advantages that skill-standards advocates hope to-achieve through the work of the NSSB. Established standards and assessments facilitate employment mobility and provide consistent information about skills and abilities to prospective employers or clients. An established and consistent certification process, as demonstrated by the Automotive Service Excellence initiative created by the National Automotive Technician Education Foundation, increases the public's trust in practitioners and helps promote a sense of professionalism.

6. **Skill standards are most effective if they are industry-driven.**

One conclusion that emerges clearly from this analysis is the importance of an institutional standards-setting infrastructure that is led by practitioners. Professional organizations, founded and comprised of practicing accountants, have directed the discussion about accounting skill standards and educational requirements since the profession was established in the late 19th century. Despite the fact that regulatory agencies have periodically threatened the private sector standards-setting infrastructure, the system has managed to maintain its distance from non-accountant business interests and governmental regulators who conspire to define accounting procedures and, therefore, accountant skills to meet their short-term needs. One important motivation for keeping standards setting in the private sector is the ability to control and upgrade the professional image of accountants through standards. Accountants have been particularly interested in trying to achieve the same status and prestige as professions such as medicine and law that direct their own standards and certification processes. Outsiders in the standards-setting process often limit the prestige and image of the profession.

Pressures to manipulate professions and trades from the outside have been important in strengthening the drive of practitioners to maintain control over their standards-setting processes. Although the NSSB has taken a less threatening, adversarial position than the SEC in influencing standards development, one reason for what appears to be overall industry support for the current skill standards movement may be to maintain industry control and limit the potential of outside influence. Certainly the NSSB has strenuously emphasized that all of the standards developed under their auspices will be voluntary. Indeed, much of the NSSB's efforts are actually directed towards gaining industry's favor and support. Industry leaders, however, may be slow to accept the promises of quasi-governmental agencies such as the NSSB. Instead of waiting for outside regulatory bodies to find fault with their industry's performance and workforce training and development efforts and attempt to take control, many industries have chosen to take a proactive role in the development and institutionalization of skill standards.

7. **A seamless preparation system that offers academic and workforce training to meet the demands of a high-performance society must be comprised of education, hands-on experience, and examination requirements.**

No set of standards can specify all of the knowledge and skills necessary to perform in a complex workplace environment. Similarly, no singular set of experiences (be them classroom or workplace) can ensure the ability to apply the necessary skills, knowledge, and insights in the most efficient, effective manner. A broad-based certification that encourages the type of professional performance required in high-performance workplaces must, therefore, be comprised of three components: (1) education, (2) hands-on experience, and (3) an examination process to demonstrate the skills that educational and workplace experiences develop. All of these components must be improved if they are to work symbiotically and ensure that employees are capable of complex workplace roles and responsibilities.

Accounting educators and practitioners, realizing the growing gap between the training that accounting students receive and the skills employers need, are currently revising their curricula and certification requirements. Initially, policymakers focused on increasing the number of hours required in school and work experiences

without specifying what those increases meant in terms of added skills and knowledge. This approach has been criticized, however, for not supplying sufficient information to build a uniform training program and ensure consistent accounting services. There is a similar thrust for outcome standards in the current skill standards movement as industry leaders and the public demand better quality performance at the workplace and are less satisfied with the traditional efforts by educators and trainers that stress seat-time and hours of training for workers.

Today's employees need a mix of classroom and workplace experiences that are tied to exact outcome measures. The quality of classroom and workplace experiences must be specified and firmly established. Specifying educational requirements that are in line with new workplace demands has been especially difficult for academic programs, which are run by educators that often have little first-hand experience with the workplace. The experience of schooling must support internship experiences in the workplace. Given constant communication and partnership between the academic and practitioner communities, a young person who goes through all of the requirements will gain a variety of experiences that together will provide a broad background and preparation—a professional preparation. The relationship that is being developed between the NSSB and the National School-to-Work Office offers hope for such a combination of experiences and a well-balanced, productive training experience. Such relationships between education and business/industry must continue and grow.

Although the content of the CPA exam has been criticized, its format has much strength. The exam has varied parts and requires the candidates to demonstrate a wide variety of knowledge and to apply that knowledge to complex situations. Although many of the questions are objective, one-answer questions, others require essays and the demonstration of technical, writing, and higher order thinking skills. Therefore, the exam is more likely than multiple-choice exams to develop into a test that can assess the judgment and problem-solving abilities that are increasingly important in accounting, and in many other occupations. Although they have yet to develop the assessment tools for their standards, many developers of industry standards are using complex scenarios to articulate standards and plan to assess the standards by requiring candidates to demonstrate their ability to perform the duties the scenarios require.

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